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Sorgo Department.

The Rural World is the only journal in the United States having a special department devoted to sorghum and sugar making from sorgho.

TROPICAL CANE.

COL. COLMAN: In my last I showed that we were paying over \$100,000,000 annually for foreign products of the cane, and that the northern farmers must necessarily compete with the tropical cane growers, even to supply our home market. Can they do it? From paragraphs we occasionally see in the papers to the effect that our northern farmers will soon be able to not only supply our home market with sugar, but have a large surplus for export, it would seem that there are those who think it an easy thing. Let us see what they will have to compete with.

The tropical cane is not raised from the seed, but cuttings of the cane are planted, and roots and stalks are thrown out from the joints or buds. After the cane is harvested, the roots do not die, but the next season send up stalks, which are called ratoons, and so on from year to year. In Louisiana, they are accustomed to plant once in three years, as after the third year in that climate the ratoons degenerate so much as to make re-planting necessary. But in the West Indies, they do not replant oftener than once in five to eight years. In many tropical countries, they do not replant more than twice in a generation. Here is a very great advantage they have in the cost of preparing the ground and planting. Then they have no frosts to trouble them, and were it not for the rainy season they could harvest and grind nearly the year round.

The northern farmer must prepare his ground, and plant every year, and run the chances of frosts in spring and fall, and drouth in summer, and his harvesting season is necessarily very limited.

The tropical soil is exceedingly rich and productive, and the area of land adapted to raising cane is practically unlimited. But a minimum part of it has yet been brought under cultivation, and the price of unimproved land is merely nominal.

In the amount of product per acre the tropical planter has a very great advantage. The yield of Amber cane in the northern States will not average over ten to twelve tons per acre. I have before me a statement furnished me by a Louisiana planter, of the yield of six leading plantations in Louisiana for the year 1879. The number of tons of cane per acre, varied from 17 to 23, averaging a little over 19. The number of pounds of sugar made from a ton of cane varied from 80 to 122, averaging a little over 100. The average was over 2000 pounds of sugar per acre, besides the molasses. In dry Egypt, the cane averages 22 tons per acre. In Brazil 25 to 30 tons per acre. In Cuba 30 to 35 tons per acre. In Barbadoes 36 tons per acre. Two tons of sugar per acre is a common production in the tropics. In many regions the production is much more than that. In the Sandwich Islands last year, 4,750 acres averaged 5 tons per acre. There has not been sufficient sugar made from Amber cane to form any correct estimate of the product per acre, but probably 600 pounds would prove a high estimate for a general crop throughout the north. So the tropical production of sugar per acre, would be from six to ten times as much as the northern farmers could hope to produce. The tropical planter can make sugar at a good profit for three cents per pound.

In the tropics laborers require but little clothing, and a large part of their food grows spontaneously, so that labor is cheap. In skill and knowledge of the business the tropics have a decided advantage at present. Thoroughly educated and trained mechanics are employed to set up, run and take care of the machinery; men who can detect on the instant when anything goes wrong, and know how to remedy it; who are constantly watching the nuts and keys to see that nothing works loose, and so get the most effective work out of the machinery. Skilled sugar makers of long practical experience are employed to oversee the work, and they have skilled workmen under them, and the common laborers are generally those who have been brought up to the business. The manufacture of sugar having been one of the chief industries of the tropics for years, they have made a study of the business, and know the best methods

and best machinery, and are always striving for the best results. They procure the best machinery that can be made, knowing that the best is always cheapest in the end. They spare no cost to procure all the appliances that will produce the best results. One plantation in Cuba, has machinery that cost over \$1,000,000, and plants that cost over \$100,000 to \$500,000 are not uncommon. The business is so profitable that it gives them ample means to procure every appliance that money can buy, and employ the best skill that the world affords.

These are some of the advantages that the tropical planter has on his side in competing with the northern farmer, in furnishing the world with sugar. They are so great as to preclude any hope that we can compete with him in foreign markets. What our chances are for competing with him in our home markets, we shall see further on.

Geo. L. Squier.
Buffalo, December, 15th, 1881.

SUGAR MAKING IN THE SOUTH.

LETTER FROM C. M. SCHWAB.

COL. COLMAN: The Riverside refinery is located near the river bank, a branch of the Achafalaya river. As you enter the main building from the river, between the boiler house on the right and the warehouse on the left, you will pass between two rows of large iron tanks, each 16 feet long, 6 feet wide and 6 feet deep, holding over 4000 gallons of semi-syrup, or just 60 gallons to the inch, made of No. 10 iron, and well supported by frame work. They are painted inside and out. This part of the building is 40 feet wide which leaves a hall or gangway between the tanks of nearly 8 feet. The right hand row is for firsts, and the left for seconds. They are connected with a large pipe extending to the vacuum pan, and stop cock to each tank, so as to have control of each separate.

After passing through to the middle, you come to the machinery, consisting of a doctor pump for hot and cold water, vacuum water pump, centrifugal, engine and syrup pumps to the right and in front, and the centrifugals, six in number, arranged on the left, with mixer above. As you pass up stairs there you come to the vacuum pump, and on a floor about 6 feet above is the 8 foot vacuum pan. I have been describing this arrangement in detail so that you may get a clear idea how everything works. It is the best arrangement I ever saw, and gives Mr. Roussel much credit. Connected with the establishment is a small steam tug, doing duty in moving flats with iron tanks on them similar in size to those inside. Some have two. When the tanks are landed full of semi-syrup from other places, a large hose, attached to the end of a pipe running to the pump and inside the building, is dropped into it, the pump started and in from 15 to 20 minutes it is pumped up into one of the tanks inside. It is there measured with a gauge stick, and tested as to density B, and booked. Sometimes fault is found with the defecation and the party notified to use more lime or less, in his next, as the case may be.

The process of working is as follows: The vacuum, air and water pumps are started, and enough syrup drawn into the pan to cover the lower coils, and a little above the lower proof stick, the stream on the lower coils turned on at certain intervals, and boiled down until it begins to show fine grains. These grains are built up by fresh charges at short intervals, and constant boiling down, care being taken not to flood the pan and melt them down again. This is carried on until the entire contents of one tank of 4,000 gallons are in and the pan pretty full. It requires from 6 to 8 hours for a strike of proof or first boiling for grain. Seconds which are not boiled for grain will finish in about 3 hours. Boiling in a vacuum pan successfully, requires a great deal of practice and experience, especially on first. When the strike is ready to let off the pumps are stopped, air valve raised, a little water sprinkled in the mixer and trough, the pan opened wide below and the contents run into the mixer at once. It is a fine sight to see this run, and so thick that it moves very slowly. You can write your name in it while hot (about 145 Fahr). The mixer is started at once, also the centrifugals, for the quicker it is drained the better, as it will get pretty stiff when cold and impossible to handle. In about 2 1/2 to 4 hours after it leaves the pan, it is drained and barreled. It is washed in the centrifugal

with cold water, some using a rubber syringe, others a small watering pot. It comes out as white as snow, and makes what is called standard A white. The pan is run without stopping, day and night, alternating with the firsts and seconds, and sometimes thirds, as the case may be. Messrs. G. Heyn and F. Degraal are the sugar boilers. The result of one strike of first, is between 12,600 to 15,000 pounds of dry sugar. A gallon of semi-syrup, at about 30 B. cold, will make from 4 1/2 to 4 3/4 pounds of sugar, three-fifths of this is standard A white, and two fifths is seconds or yellow.

The sirup, which comes from the centrifugals, collects in the rear, and is pumped up into the tanks for seconds on the left. These tanks are provided with blow-ups; that is, inch-pipe extending down and along the bottom, and perforated for the purpose of blowing live steam into the sirup to melt the small grains left in from the centrifugals, and also to raise a seum of the gum in it. This, I think, would do well for sorghum even on first, for it is about equal in gummy matters to their seconds.

Seconds do not grain in the pan, but are boiled to what is called string proof, and put into sugar wagons, which are moved to the granulating room on the same floor above the mixer. This room is kept warm by steam coils of one inch pipe. After five days this sirup is granulated solid with perhaps a few inches of these syrups on the top, and is ready for the centrifugals. The contents of the wagons are dumped into the mixer. It comes out in a solid square mass and has to be cut in two with spades to go into the mixer. These seconds make the yellow sugar. It takes much longer to drain, but is not washed. The wagons hold about 300 gallons and give about 700 lbs. dry sugar each. They are iron boxes on three wheels, one of which is like a castor; they can be moved around handy. The sirup from the seconds is either boiled for thirds and left standing some months in wagons, or (when sirup is in demand as at present at good prices), boiled to molasses and shipped. It brings at present 4 1/2 cents per gallon.

The raw juice that is shipped here is pumped back some three hundred yards to a factory consisting of cane mill and kettle train. It is here boiled to semi-syrup, and run back to be finished in vacuum pan like the rest. I have stated before how long this juice is kept sometimes without spoiling, but I have seen cane lying around the mill here also for weeks before it was ground up, without giving the least trouble in making sugar. This does not accord well with our theories about sorghum, in fact I found a good many things here different from my expectations. The best grades of sugar are made here now by a cheap and simple process, that a few years back was only thought possible by the use of bone black filters. The sulphur process is superseding the bone black, except in city refineries, but it must be used understandingly to be successful. Riverside and Point Pleasant, with two other adjoining plantations, are owned by Col. G. G. Zenor, a gentleman of large business capacity, and who closely tends to his business, and has been financially very successful. On being introduced to him he invited me to stay and make myself at home as long as I wished, and get all the secrets, if I thought they had any in sugar making. This has been the case at every place I have visited. As for the secrets there is only one, and that is directly in the juice of their cane. It is unquestionably purer, and contains less pectine and gummy substance than sorghum. When clarified and boiled for table sirup it will not keep long, unless sealed up fresh, as it will granulate rapidly and get sour, and even if it did, it would be worth about \$1 per gallon from the amount of sugar it contains in an available condition.

Sorghum is not very popular here. Mr. Zenor had forty acres this season, but only worked up half of it. It grows of good size, but the soil is not suited for it, making only a dark sirup and no sugar. They like it as a forage plant, but raising so little stock they can not utilize much of it. My letter is getting pretty long, so I will close. I will write you again in a few days.

Riverside, St. Marys Parish, La.

Letter from C. D. Roberts.

Geo. C. W. Belcher, Esq.: I see in the Rural World of December 1st, 1881, your letter on the past year's work, giving results, &c. How much better it would have been for you to have had your works so arranged that you would not have had to re-arrange them so much.

You say, "What we want to do is to make 300 gallons of sirup in twelve hours with the labor of two men." If you, or any man or company, will let me arrange works for making sirup and sugar—put them up, and run them on

southern principles—I will agree to make them from 300 to 500 gallons of sirup in twelve hours with two men with your cane. The works I had so arranged in Florida, with two feed then that never had seen sugar made, we could make from six to seven hogsheads of sugar in twenty-four hours. I attended to preparing the juice for the defecators, and also for the finishing evaporator. These two men did all the skimming, washing of pans, tanks, juice boxes, &c. I run the finishing pan, making the sugar and watching the sugar coolers, &c.

I will arrange the works, either to run by steam or fire. I regard steam to be much better than fire, through more experience. Oh, what money has been lost by hard working, honest farmers, who have been misled by men that have written long articles, giving plans for works, directions for clarifying the cane juice, making sugar, &c., who have never learned the trade of putting up works and running them in the south! The southern and northern cane must be pressed, clarified, and worked up on the same principles to obtain the same results. My faith is no stronger now than it was when we last met, on making sugar in large and paying quantities from the northern cane.

C. D. Roberts.

Wayne county, Ills.

Sorgo in Iowa.

COL. COLMAN: The cane growing in this (Crawford) county is on the increase, and still the people demand more than has yet been supplied; and good sirup, I think, will continue to be in demand for years to come, at a price that will give the grower and manufacturer a good fair profit. I have made, for myself and others, the past season 1940 gallons, and there are several other parties in the county, who have made nearly or quite as much. The quality is fine, and brings fifty cents per gallon by the barrel. The wet weather hindered me about grinding, as I did not have my mill under cover. Some of the cane I left in the field in piles with the leaves on until it was colored by the weather considerably, and I found that sirup was dark and had a rather strong taste. I am thinking some of starting next year with steam, and I wish to know what sized engine and pan are necessary to grind and boil 200 palls in twelve hours? What sized pipe should be used for steam coil, and how close together to obtain the desired result? Any other information or suggestions will be thankfully received through the Rural World.

I should be glad to attend the Mississippi Valley Cane Growers' Association in January, but my business is such that I cannot possibly get away. I wish you a good time and a successful gathering.

We have a county association here, which is helping to keep up the interest. We will meet about February 1st. Our secretary will send a record of our proceedings for the Rural World, if you wish.

M. M. Smith,
Denison, Iowa, December 15.

REMARKS.—We do wish to get the proceedings. We desire to get all the experience and information attainable for our readers. Our list of sorgo readers is very large and daily increasing, on account of the information we publish from all parts of the Union, relating to this important industry. Our readers are invited to answer your interrogatories.

Sorgo in Southern Kansas.

COL. COLMAN: Now that the season for working sorghum cane is past for this year, let us have the experience of all related and thoroughly discussed, both successes and failures. The cane crop in this (Montgomery) county this season was badly damaged, both by the chinch bugs and drouth. Cane that was planted early, and worked at the proper time yielded well and made excellent sirup, but late planted cane was very nearly a failure and what was worked made dark, inferior sirup.

I planted fourteen acres of Orange and Amber cane, of which I only worked seven acres, the rest being so badly damaged that it would not pay for working up. I made some sirup from a ratoon crop of the first cutting of the Early Amber, and I am satisfied that two crops a year of this variety can be readily grown in this latitude. Most of the cane I worked marked 10 degrees B. I am satisfied with the results of the season's work, taking into consideration the quality of the crop. This portion of Kansas seldom produces a bad crop of cane. I never lived in a county where it did better. I intend to increase my facilities for manufacturing, next year, and also plant a larger crop of cane. All that I want to know is that

I am right—and then I intend to push ahead. My experience has cost me much, but not withstanding this I am bound to stick to it.

Good reliable cane seed is going to be scarce at planting time, and those who contemplate planting had better look out for seed in time.

What we need in this county is a large sirup and sugar manufactory, to work up all the cane raised, and anyone wishing to invest capital in this industry, can not do better than to give our people a trial. Our people are very much interested in cane growing, and any reasonable demand that would be made on them by anyone who would put up such a manufactory, would be readily met, and amply guaranteed by them. Anyone desiring information about the erection of a sugar manufactory here, will find me always ready to give any information within my knowledge. I have not an ax to grind in this matter. My farm is not for sale, nor am I engaged in the sale of real estate, or sorghum machinery, neither a candidate for office. It is a pressing need of the county, and I am always willing to do my part towards developing its resources.

P. S. Moore.

Independence, Kansas.

Agricultural.

Posts for Fences.

Mr. Parker Earle says, in the Farmer and Fruit Grower, that in building a fence around our young orchard several years ago, we tried many plans for preserving the posts. Having occasion to remove the fence this winter, we noted the condition of the posts as follows: Those set with no preparation were decayed an inch or more in thickness. Those coated with a thick wash of lime were better preserved, but were quite seriously attacked by worms. Those posts coated with hot tar were perfectly sound as when first put in the ground. Those painted with petroleum and kerosene were equally sound and as good as new. In future, we shall treat all posts in the following manner before setting: Let the posts get thoroughly dry, and then, with a pan of cheap kerosene and a whitewash brush, give the lower third of the post, the part to go into the ground, two or three good applications of the oil, letting it soak in well each time. Posts so treated will not be troubled by worms or insects of any kind, but will resist decay to a remarkable degree. This we find to be the simplest, easiest, cheapest and best method of preservation.

FARM TOPICS.

Steel tools should never be heated, either for forging or tempering, in a fresh fire unless it be charcoal. If coals are not at hand the fire should be allowed to burn until all the gas has burned out of the coal before the steel is introduced.

The yield of hops throughout the country is 25 per cent. below the average. The quality of the hops raised in New York is good, and they are quite free from vermin. The yield in Wisconsin is fair, but considerable injury was produced by wet weather during harvest time. There is a large decrease in the yield in California, but a considerable increase in Oregon and Washington.

Sixty-four new national banks were organized during the year ending Sept. 30, and twenty-eight went into voluntary liquidation. There were no national bank failures during the year. The number in existence at the beginning of the year was 2,136. Semi-annual duties or taxes received from the holders of the bonds issued for security of bank circulation, \$360,505,900. The banks have \$41,000,000 in gold.

F. W. Morrow said at the Elmira Farmers' Club—I know a farmer who plows all his clay land in fall that he wants to sow with oats or barley in the following spring. His principal crop is oats, and he gets larger yields than his neighbors who have land of similar character that they plow in spring. He gets the seed in earlier and in better condition. His fall-plowed land is dragged thoroughly as soon as dry enough in the spring and the seed dragged in before his neighbors can plow.

Heretofore the pecan crop, as a source of revenue, has attracted but little attention. No care whatever has been taken of the trees; in fact, in many localities trees fifty to one hundred years old have been cut down solely to obtain the nuts. Before the civil war the exports from the Port of Indianapolis alone were reported at \$100,000; now it is estimated that the amount annually gathered exceeds \$1,000,000 in value. With proper care of the trees and systematic gathering of the crop, it is believed that \$10,000,000 could be realized annually. Millions of bushels are lost every year by falling on the ground and rotting, or are devoured by hogs, squirrels, turkeys and other animals and birds. Except enclosed in pastures, no claim is made by the owners of the land to the fruitage of the trees. Mexicans and negroes are the pecan gatherers, and in some districts white children.

A tobacco expert says that we have six hundred and forty thousand acres planted in tobacco at present, and that we raise ten pounds of tobacco for every human being in

this country. Kentucky is far ahead in this production, and in followed about half way by Virginia, and then comes Pennsylvania and Ohio. John Anderson, who died at the close of the week, was perhaps the most successful manufacturer of tobacco in the world. Perhaps I may except the Lorillards, who within the past few years have rather put on more steam than Anderson. Anderson was for a long time owner of the New York World in conjunction with Belmont and others. He had a curious propensity for literary things, and maintained a little paper at his home in Tarrytown. He also endowed Professor Agassiz with a natural history island, but the son of Agassiz became so rich in the mines of Michigan that he wanted no more islands.

Many farmers build large houses, or costly houses; but how good they may be depends upon their plan. We see far too many of the fancy plan in which the walls shut out more space than they shut in, full of re-entering angles and suggestive of small and comfortable rooms. You who intend to build, please out on this remark and preserve it: The farther your plan departs from the old style square house, with hall through the center, the farther it departs from comfort and convenience. A square house with rooms on each side of the hall opening into each other by wide double doors, and if you wish to be quite elegant let wide doors open from the hall also, is the most economical of room of any, and the most comfortable. The hall on the second floor should be wide also, with windows at the end. A house on this plan may have bay windows and all the modern elegances you choose to spend upon it, or it may be severely simple. In either case it is a thing of comfort and a joy forever.

An "Observer" in The Western Rural, after moralizing over the early decrepitude of persons engaged in large mercantile enterprises in these days of rapid movements and intense competition, advises every man of means to keep up an interest in the native employment of the race, so that, like Anteus, he may be refreshed, when age or exhaustion comes on, by actual sympathetic contact with Mother Earth. "Let him early provide himself with a rural home," which may be, if he pleases, a rus in urbe—"let him plant some trees; grow some fruit that is worthy of introduction; procure a favorite animal, or choice fowls; and with these occasional diversions the depression which follows extreme excitement or effort will be palliated, and lethargy, imbecility or monomania prevented. Having these resources he will not be a burden to his friends but will be re-invigorated after mental efforts, and the decline of his life will be cheerful, beneficial and serene. A few pet trees or plants in the garden, the training of which will demand little labor, while the daily developments of their growth can be watched with unceasing and ever-freshening interest, are eminently a solace for the evening days of life."

The full-grown ferret is about fourteen inches long, and is noted for its great strength and boldness. Ferrets are bred quite extensively in Europe, for hunting rabbits, rats, and mice. Though regarded as a domesticated animal, the ferret is far from docile, and never shows an affection for those who care for it. The natural instinct of the animal is so strong that it does not need to be trained to attack its prey, though practice improves the animal in its work, the chief gain being in allowing themselves to be more readily caught. The ferret is always muzzled to prevent it from killing its prey; if this precaution is not taken, it will suck the blood of its victim, and fall into a sleep from which it will not arouse until the food is digested. When sent out muzzled the ferret will return after the hunt to receive food. It runs into the burrows of the rabbits, for which animal the ferret seems to have a natural enmity, and drives the timid creatures out, where they are caught in nets and snares set for the purpose. A ferret will soon rid a house of rats and mice, and it is for this purpose principally that the animal is now bred and cared for by man.—American Agriculturist.

Mr. T. S. Gold, West Cornwall, Conn., writes as follows in the N. E. Homestead of some of the theories put forward to account for the running out of timothy, and of his purpose to try a plan that has proved successful in the case of clover: "The disappearance of timothy from our natural meadows is variously accounted for. First, it is charged to the mowing machine as cutting too closely. We usually run our machines at medium height, rarely using the closest cut, but would prefer the medium or highest. Here we encountered a difficulty from the fingers clogging with fine grass, so that we could not use the highest cut, and the machine would run over much of the lodged grass. Second, it is charged to too early mowing, as we mow some two weeks or a month earlier than formerly. Timothy runs out most upon seedling of the early cut meadows. Third, we agree with those who attribute it to the peculiar character of our seasons rather than to either of the above. Some period of each year of the last ten has been remarkably dry, and the timothy has never recovered from the effects. As timothy is cut earlier, there is less natural re-seeding than formerly, also less is foddered out on the fields, scattering the seeds. I shall try re-seeding with timothy, with top dressing and the Thomas smooching barrow. I have tried red clover successfully in that way. This seems to be the best means to overcome the white daisy. Give an abundant top dressing, thirty cart-loads per acre, and four quarts of clover seed harrowed in. Two applications will surely prove effectual on any reasonably good land."

The color and lustre of youth are restored to faded or gray hair by the use of Parker's Hair Balsam, a harmless dressing highly esteemed for its perfume and purity.

Farmers Societies.

[This Department will contain articles designed to advance the interests of the Grange, the Farmers' Alliance, the Farmers' Congress and the Anti-Monopoly Organizations.]

Rolla State Grange Resolutions.

The Missouri State Grange, at its session at Rolla, unanimously adopted the following:

Whereas, COLMAN'S RURAL WORLD was one of the first papers in Missouri to espouse the Grange cause, and to urge the farmers of the State to organize themselves into granges; and

Whereas, It has ever been the faithful, earnest and consistent friend of the Grange and of the agricultural classes of the State, assiduously laboring to advance every agricultural interest and to elevate the profession of agriculture to a higher standard; therefore, be it

Resolved, That the Missouri State Grange cordially indorses COLMAN'S RURAL WORLD and recommends it to the support of the Farmers of Husbandry of the State of Missouri.

The St. Louis County Grange meets at Meramec on Wednesday, January 4th, at 10 a. m. It will be an important meeting, and there should be a good attendance.

Anti-Monopoly.

EDITOR RURAL WORLD: As I aim at nothing less than proving, that the exigencies of our time demand government ownership and operation of all inter-state and trans-continental railroads, telegraphs, etc., it is incumbent on me to first show whence the right of the government to this ownership, etc.

There is an opinion prevalent, and entertained by a great many persons, that a man has a right to do what he likes with his own. This opinion, I am sorry to say, is not entertained by only those whose interests demand the propagation of this dangerous doctrine, but by well-meaning persons as well, who have no interest in supporting monopoly in any form. It is the latter to whom this number is addressed. Let us start at the beginning and ask if a man has any absolute right, even the right to live? The Declaration of American Independence proclaims the doctrine that man's right to life, liberty, and the pursuit of happiness, are both natural and inalienable. Did Jefferson mean that this declaration should be accepted literally? If he did he was the greatest liar of the century, and as he is one of our economic deities, I cannot for a moment entertain the idea that he meant just what he said. At the time that this immortal declaration was promulgated, the jails of Philadelphia contained men who were deprived "of liberty" and the "pursuit of happiness." Public executions then as now, deprived men of life, life, liberty, and the pursuit of happiness; are therefore, not absolute, but limited and conditional rights.

We all remember how men were "drafted" during the late civil war, and sent to the front to be shot down or captured and put into a prison pen. We see, therefore, that man has no absolute right to life, much less to the peaceful enjoyment of what makes it possible and enjoyable. But I anticipate. If a man hasn't an absolute right to life, by what tenure does he hold it? Man in the first years of his existence lives by sufferance. When he arrives at that age that imparts the duty of supplying his own wants by his own efforts, he lives life by right, not absolute, but limited and conditional. In order to live there are certain things which he must not do.

Labor then is the duty which confers the qualified right to life, which man enjoys. "In the sweat of thy face shalt thou eat bread." So said God to Adam, and through him to you and I, reader. Labor then is the one condition upon which man can claim life as a right. As a man cannot live without food and raiment, and as these can be obtained only by labor, and as it is every man's duty to provide for himself, it follows that a man is entitled to the use and control of what he, himself, produces, does it not? In other words, can't a man do as he pleases with his own? A man's life is his own, is it not? Yes, certainly. Can he do as he likes with it? No; he must part with it when commanded to do so by the government. I have seen thousands who thus surrendered their lives at the call of duty. Every able-bodied man in the state of Missouri who is subject to military duty, is liable to be called on at any moment to surrender up his life in defense of the rights of property of the very class who are continually shouting "has not a man a right to do what he likes with his own?" If you, reader, will only stop to think and ask yourself whence your right to this, that or the other thing, you cannot avoid arriving at the conclusion that if you enjoy any rights they come to you by and through the laws of the land. You hold your property because our supreme law provides that any man shall not be deprived of his property except by due process of law, and because larceny is declared a crime which it is the duty of the state to protect you from, and to punish. Repeal all laws against robbery, burglary and larceny, and there would be no Gouls and Vanderbilts. There would be no call for anti-monopoly organizations. It is the merest kind of nonsense to talk about natural rights in a state of civilization, or the right of the individual against the interest of the community.

"Has not a man a right to do what he likes with his own?" Every man who has had a surveying party out through his orchard or through his corn field as one did through mine, or through his front yard or family burial ground, as is frequently done, will answer this question in the negative. Every land owner who has had a public road laid out on his farm without so much as being asked "by your leave," will hardly answer in the affirmative.

A government of the people by the people for the people, one that is based on the principle of the greatest good to the greatest number, as we claim ours to be, cannot for one moment admit the right of any man or set of men to do what he or they please with their own. No man or set of men have a right to do wrong. If I do what you like with your own property you do a wrong, or injure any

injury on your neighbor, it at once becomes the duty of the government to put a stop to your wrong doing. If ours is a government instituted for the equal protection and good of all, the toleration of a wrong is contrary to its genius, and it undoubtedly has the power to right it.

If ours is a government of the people, for the people, by the people, it is clearly within its province to so regulate matters that one or ten men shall not, under protection of charters and special privileges, take to themselves the full benefits flowing from the operations of natural forces which have been seized upon and converted into agencies of production by the inventive genius of this and other generations.

Under God, I recognize no temporal power but the people, and believing that the people can do no wrong, and that it is clearly their interest to take to themselves the benefits accruing from the operations of nature, instituted by the Creator for the good of all his children, I advocate what I stated at the beginning of this communication.

But how about the sacredness of contracts? Of this in my next.

Salsbury, Ark. W. M. MANNING.

Adulteration.

I have read an article in one of the dailies, in which it is stated, on what appears to be good authority, that it is next to impossible to get pure lard in the cities. All the lard in the markets is said to be adulterated with old grease, tallow, oleomargarine, and such material, repulsive to the taste and the olfactory.

One of the worst poisons in common use is arsenic. This substance is used to a fearful extent, and I have no doubt thousands are innocently injured every year by it. About three million pounds of arsenic is imported by this country annually.

Chemists say that one pound will fatally poison 2,800 human beings. If this be true, and I presume that it is, the arsenic consumed annually in the United States would poison eight billion, four hundred million persons. Now, what becomes of this enormous quantity of virulent poison? One chemist reports that he found ten grains of arsenic in every square foot of a ladies' dress; another—ten grains in a single artificial flower. Vast quantities are consumed in the manufacture of lamp shades, window curtains, wall paper, wrapping paper for confectioneries, paper boxes, eye-shades, tickets, artificial flowers, and many other articles in daily use.

Most of the confections used by the ladies for beautifying (?) the complexion contain arsenic, and sometimes in such quantities as to become an actual poison. Within the last year I read of two women who lost their lives by its use in that way. Many women take it internally in small quantities, for the purpose of bleaching the complexion and making it white, and I know of one case in which death resulted from its use for that purpose. I have known paper collars so strongly impregnated with arsenic that they would produce eruptions of the skin of the neck.

It stands everybody in hand to guard against the use of poisons in this wholesale way, for there is scarcely a doubt that great suffering is caused by their use.—Ex.

Co-operation.

The season for the active winter work of farmers' clubs is about at hand. These organizations, which cost so little, are yet of great value to the farmer, yet it is a misfortune that those who would be most benefited by them seek their aid the least. The same is true of every institution connected with agriculture; those who would be most benefited by the discussions in the grange, the debates in the farmers' clubs, the essays read at farmers' institutes and at the meetings of the different State boards of agriculture, are seldom attended by those who would be most benefited by them.

It may be true that some of the essays read at these gatherings are of such a character as to be beyond the comprehension of the ordinary farmer and consequently of little value to him; yet the fact is that it is not the ideas which are above his comprehension, but the language in which they are clothed. These essayists should bear in mind that those who should be benefited by their writings are neither linguists, philosophers nor scientists, and that it is useless in this connection to write essays which will require as much learning to understand as in the writing of them. At the same time we should expect that those essays would be in advance of the majority of their hearers, or no one would be benefited by them. Our idea of a good essay or a good newspaper article is one which contains great ideas and important truths, clothed in correct, but plain, simple and intelligible language.

To the average individual the farmers' club and the grange club are of much more value than any other institution, because farmer talks to farmer of questions in which they have a common interest, and in such language that the speakers and hearers can easily understand each other. It is much easier to comprehend an idea clothed in simple language than when mental effort has to be made to understand the language before the idea can be reached. On the other hand, it is not very profitable to continue year after year the discussion of old and stereotyped questions, although they may not have been exhausted, yet living issues are continually presenting themselves, of which the club should take particular notice. Such subjects would have a reviving and stimulating influence upon the members. Again, it is possible to revive old subjects under new phases, and a live and healthy club cannot exist where such subjects are ignored.

Among the many subjects for discussion in such clubs that of local taxation is an important one. Does taxation bear on all alike, or does the poor man, the farmer of small means, have to support a tax greater than his ability compared with the man of affluence? Another important question is, how far can farmers co-operate in the use and purchase of improved implements, which are highly important in reducing the cost of labor upon the farm, and without which the farmer of small capital cannot compete with the one of larger means? In the first place there

is the roller, a very important implement, found upon few farms, and perhaps only wanted for a few hours in a year; one of these rollers in a neighborhood would meet the requirements of a number of farms. In the matter of large breaking-up plows, necessary upon every farm and yet only occasionally used upon any one implement would meet the wants of a number of farms. Even a mowing machine can be made to do the work for a number of farms by a little judicious management; so with seed sowers, planters and manure spreaders, each of which could be made available for several farms.

These are important matters and must be considered by the small farmers or they will find themselves left in the race for success in farming. The large farmers of the country will eventually swallow up those of moderate means, as they have swallowed the small farmers in other countries, unless forewarned. The strength, independence and prosperity of a nation depends upon the prosperity of its small landholders, and if they do not take care and protect themselves in this free-republic they must not expect others to care for them. Large landed proprietors have their interests to care for, and if they are not true to their own responsibilities, who will assume responsibilities for them? Between the large and small landholders there need be no antagonism; the former, it is true, occupies the vantage ground, though when we use upon the small landholders depends in order successfully to compete with their more favored brother farmers, we do not desire to see animosity engendered. We hope to encourage only a fair and honorable rivalry in business. When we speak of large farmers swallowing up the smaller ones we do not use the metaphor in any sense to cause ill feeling between the two, but to point out inevitable consequences, unless some efforts are made by which the small farmers can compete with the larger ones upon equal terms. Co-operation in its broadest sense is the friend of the average farmer—American Cultivator.

Needed Legislation.

Hon. James Wilson says in the Traer Iowa Clipper: "Let us get ready to petition the coming Legislature relative to the wants of the State. Cattle disease and hog disease require attention. It is a shame that our State is behind in this regard. Dogs should be taxed specifically with outlawry as penalty. The road laws need changing to money taxes instead of labor. Food adulteration should be attended to by requiring true labels of contents, or confiscation as penalty. Public printing is too high and should be reduced. Reasonable rates to the Mississippi should be provided for, on Iowa freights. Allowable rates of interest should be reduced from ten to eight per cent."

We live in hope that the strong farmer element going into the Senate from Tama, Muscatine, Iowa, and other counties will have influence enough to secure legislation to protect the herds of Iowa from pneumonia. It will give pain to many nice, utter bandbox people to see it come about; they will look upon it as a grievance of a very questionable sort; it will be rated as sort of communism by men who, through farmers' negligence, have influence, but the fact that many states have such laws may be argued; they cannot well meet. Congress ought to stamp out the disease but will not do anything. The weak farm influence that reaches them would not lift an eyebrow if the last cow in America were in danger. How can we look for action in Washington when all the influence agricultural Iowa could bring to bear on the last Legislature only affected the number of pounds in a bushel of Hungarian grass seed?

Lecturer's Communication. National Grange, P. of H., January, 1883. Subjects for subordinate granges for this month are Nos. 1 and 2. Question 1—How to prosecute grange work to accomplish the best results in subordinate granges during the year? Suggestions—Officers, doubtless selected last month, should now be installed, and resolve to be in attendance at every meeting of the Grange, and to do all they can to make the meetings pleasant and profitable. So should every member determine to be equal as regular in attendance, and strive to make them interesting. Go to each meeting taught; see that the quarterly reports are promptly made to the Secretary of the State Grange, and all state dues paid; also, that the semi-annual reports to the Master of the State Grange for the quarters ending March 31st and September 30th, 1882, be made, giving increase of membership by initiation and reinstatement, as well as the decrease by death or otherwise; the progress made in education, co-operation, success or failure, and the causes leading thereto.

Ques. 2—What is co-operation? Sug.—The consolidation of the efforts of many in any work is co-operation. Efforts of many co-operatively applied will accomplish what few could do. Our government is founded on this principle, and success is in the direction and for the purpose in which its citizens apply co-operative effort. If farmers concentrate their efforts and co-operate upon grange principles, they can shape the future destiny and welfare of the government. Through non-co-operation of farmers the capitalists and corporations control it to their own interests. An obstruction in a highway that one man could not move, and would be useless for him to attempt, twenty men co-operating might move with ease. By co-operation the large mountains are tunneled from base to base in a single year, while individual effort would require a life-time, and then fail.

The Sunday Argus, Louisville, (Ky.), observes: A Woodbury (N. J.) paper mentions the case of the wife of Mr. Jos. H. Mills, of that place, by St. Jacobs Oil. She had rheumatism. A remarkable feature of this year's tobacco growth is the production of a second crop in Kentucky from the suckers, where tobacco was cut during the drought. Like reports come from some of the seed leaf districts. It is said that the second crop in many instances proved better than the first.

To promote a vigorous growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp.

The Grange in Chariton County.

EDITOR RURAL WORLD: Failing to see anything in regard to the workings of our order in this vicinity appear in your columns, I venture to pen a few items, which may be of interest to your readers, and at the same time, comply with a request of some of the members of Center Grange. To give you an idea of what we are doing in this country, I will say that Chariton County Grange met with Washington Grange Oct. 5th, 1881.

Attendance was very good, taking into consideration the inclemency of the weather. Most of the subordinate granges in the county were represented. Business was transacted smoothly, and with dispatch. Officers elected for the ensuing year were as follows:

W. M.—E. D. Hershay; O.—L. H. Fleet; L.—J. T. Robinson; S.—Alfonzo Hurt; A. S.—J. L. Eldson; C.—E. T. Baker; T.—J. M. Hamilton; S.—H. C. Tinsley; G. O.—T. J. Smith; P.—Harriet Hamilton; C.—E. O. Fleet; F.—Mary Hurt; L. A. S.—Sallie Ford; and J. T. Robinson delegate to the Missouri State Grange. I would say to all whom it may concern, that our next County Grange will meet with Center Grange on the 4th day of January, 1882. Officers elect will be installed. All Patrons are especially invited to attend. W. M. Eshbaugh is expected to be present. Come one and all, and have a good time. H. C. TINSLEY, Sec'y. Westville, Chariton County, Mo.

If You Wake up in the Morning

with a bitter, bad taste in your mouth, take Simon's Liver Regulator. It corrects the bilious stomach, sweetens the breath and cleanses the furred tongue.

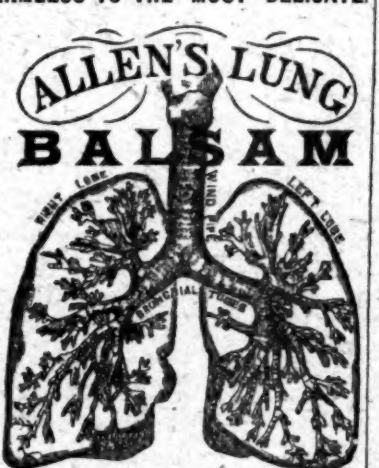
Mr. Cooper of Indiana, in regard to seeding to grass, says: I have sowed clover, timothy and blue grass, and the longer it lays the more blue grass it gets. It gets thicker all the time, and keeps moulting off at the head until it becomes sort of bunchy.

In the cure of severe coughs, weak lungs, spitting of blood, and the early stages of Consumption, Dr. Pierce's "Golden Medical Discovery" has astonished the medical faculty. While it cures the severest coughs, it strengthens the system and purifies the blood. By druggists.

The Galveston News estimates that three-fourths of the good black walnut of this country has been used up within the last ten years. Recalling the fact that good black walnut is worth \$150 per 1,000 feet, and that it requires 100 years to grow a good black walnut tree, the question is asked whether it is not about time to give some attention to forestry as a popular science.

A GOOD FAMILY REMEDY!

STRICTLY PURE, HARMLESS TO THE MOST DELICATE.



[This engraving represents the Lungs in a healthy state.]

A Standard Remedy

IN MANY HOMES. For Coughs, colds, Croup, Bronchitis and all other affections of the Throat and Lungs, it stands unrivaled and utterly beyond competition.

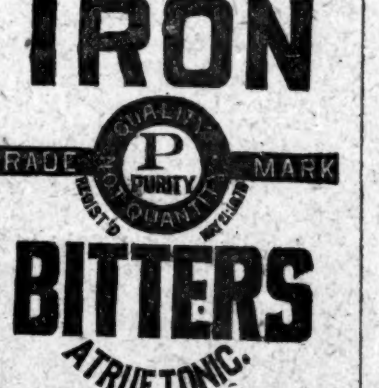
In Consumptive Cases. It approaches so near a specific that "Ninety-five" per cent are permanently cured where the directions are strictly complied with. There is no chemical or other ingredients to harm the young or old.

CROUP! Mothers will find it safe and sure remedy to give their children when afflicted with Croup.

AS AN EXPECTORANT IT HAS NO EQUAL! IT CONTAINS NO OPIUM IN ANY FORM.

J. N. HARRIS & CO., Proprietors, CINCINNATI, OHIO.

FOR SALE BY ALL DRUGGISTS.



BROWN'S IRON BITTERS are a certain cure for all diseases requiring a complete tonic; especially Indigestion, Dyspepsia, Intermittent Fevers, Want of Appetite, Loss of Strength, Lack of Energy, etc. Enriches the blood, strengthens the muscles, and gives new life to the nerves. Acts like a charm on the digestive organs, removing all dyspeptic symptoms, such as tasting the food, belching, Heat in the Stomach, Heartburn, etc. The only Iron Preparation that will not blacken the teeth or give headache. Sold by all Druggists at \$1.00 a bottle.

BROWN CHEMICAL CO. Baltimore, Md. Beware of imitations.

40 Large Chromo Cards, Feathers, Handkerchiefs, etc. Postpaid. G. W. L. NEED & CO., New York, N. Y.

Challenge Well Auger Company

Manufacture the Well Auger that will bore any kind of earth—makes a well any size required—and is a perfect success in Quicksand and Hardpan; will easily make a deep well in one day. Our Combined Machines for Horse Power, consists of both Earth-Boring and Rock-Boring tools. The Earth Auger is used till rock is reached, when the rock boring tools are attached, and the boring continued till an abundant supply of pure water is obtained. Our tools are equal to, if not better than those of any manufacturer in the United States, and prices below the lowest. Catalogues mailed free. Address

CHALLENGE WELL AUGER CO., 1420 NORTH TENTH STREET, ST. LOUIS, MO.

Our Price-List for the Fall of 1881 is now ready, and will be sent free to any address. We sell all kinds of goods, in any quantity, at wholesale prices. Send for Price-List, and see how well we can supply all your wants.

FOR YOU

We are the originators of the system of dealing direct with the consumer at wholesale prices. Experience enables us to avoid errors. No obligation to buy.

MONTGOMERY WARD & CO., 227 and 229 Wabash Ave., Chicago, Ill.

Important to Grocers, Packers, Hucksters, and the General Public.

The KING FORTUNE-MAKER!

OZONE A New Process for Preserving all Perishable Articles, Animal and Vegetable, from Fermentation and Putrefaction, Retaining their Odor and Flavor.

"OZONE—Purified air; active state of oxygen."—Wattsman.

This Preservative is not a liquid alkali, or any of the old and exploded processes, but is simply and purely OZONE, as produced and applied by an entirely new process. Ozone is the antiseptic principle of every substance, and possesses the power to preserve animal and vegetable structures from decay.

There is nothing on the face of the earth liable to decay or spoil, which Ozone, the new Preservative, will not preserve for all time in a perfectly fresh and palatable condition.

The value of Ozone as a natural preserver has been known to our able chemists for years, but, until now, no means of producing it in a practical, inexpensive and simple manner, have been discovered.

Microscopic observations prove that decay is due to septic matter or minute germs, that develop and feed upon animal and vegetable structures. Ozone, applied by the Frédis process, seizes and destroys these germs at once, and thus preserves. At our offices in Cincinnati we can send, almost everywhere, articles that can be thought of, preserved by this process, and every visitor is welcome to come in, taste, smell, and take away with him, and test in every way the merits of Ozone as a preservative. We will also preserve, FREE of charge, any article that is brought or sent, prepaid, to us, and return it to the sender, for him to keep and test.

FRESH MEATS, such as beef, mutton, veal, pork, poultry, game, fish, etc., preserved by this method, can be shipped to Europe, subject to atmospheric changes, and return to this country in a state of perfect preservation.

EGGS can be treated at a cost of less than one dollar a thousand dozen, and be kept in an ordinary room six months or more, thoroughly preserved; the yolk held in its normal condition, and the eggs as fresh and perfect as on the day they were treated, and without "strictly choice." The advantage in preserving eggs is readily seen: there are seasons when they can be bought for 5 or 10 cents a dozen, and by holding them they can be sold for an advance of from 100 to 200 per cent. One man, with this method, can preserve 5,000 dozen a day.

FRUITS may be permitted to ripen in their natural condition, and can be transported to any part of the world. The juice expressed from fruits can be held for an indefinite period without fermentation—hence the great value of this process for producing a temperance beverage. Cider can be held perfectly sweet for any length of time.

VEGETABLES can be kept for an indefinite period in their natural condition, retaining their color and flavor, treated in their original packages, at a small expense. All grains, flour, meal, etc., are held in their normal condition.

BUTTER, after being treated by this process, will not become rancid. Dead human bodies, treated before decomposition sets in, can be held in a natural condition for weeks, without putrefaction or the odor or repulsive body in any way—hence the great value of Ozone to undertakers.

There is no change in the slightest particular in the appearance of any article thus preserved, and no trace of any foreign or unnatural odor or taste. The process is so simple that a child can operate it as well, and as successfully as a man. There is no expensive apparatus or machinery required.

A room filled with different articles, such as eggs, meat, fish, etc., can be treated at one time, without additional trouble or expense.

In fact, there is nothing that Ozone will not preserve. Think of everything you can that is liable to rot, decay or spoil, and then remember that we guarantee that Ozone will preserve it, in exactly the condition you want it, for any length of time. If you will remember this, it will save asking questions as to whether Ozone will preserve this or that article—it will preserve anything and everything you can think of.

There is not a township in the United States in which a live man can not make any amount of money, from \$1,000 to \$10,000 a month, if he pleases. We desire you to place the business in each county in the United States, in whose hands we can place this preservative, and through him secure the business which every county ought to produce.

A FORTUNE Awaits Any Man who Secures Control of OZONE in Any Township or County.

A. C. Bowen, Marion, Ohio, has cleared \$2,000 in two months. \$2 for a test package was his first investment. Lebanon, Warren County, Ohio, made \$2,000 on eggs purchased in August and sold November last. \$2 for a test package was their first investment.

F. K. Raymond, Morristown, Belmont County, Ohio, is clearing \$2,000 a month in handling and selling Ozone. \$2 for a test package was his first investment.

D. F. Webber, Charlotte, Eaton County, Michigan, has cleared \$1,400 a month since August. \$2 for a test package was his first investment.

J. B. Gaylord, 50 La Salle street, Chicago, is preserving eggs, fruit, etc., for the commission men of Chicago, charging them half cost per dozen for eggs, and other articles in proportion. He is preserving 5,000 dozen eggs per day, and on his business is making \$6,000 a month clear. \$2 for a test package was his first investment.

The Cincinnati Feed Co., 498 West Seventh Street, is making \$5,000 a month in handling brewers' malt, preserving and shipping it as feed to all parts of the country. Malt preserved so in 24 hours. Preserved by Ozone it keeps perfectly sweet for months.

These are instances which could be multiplied for the purpose of publishing. There are scores of others. Write to any of the above parties and get the evidence direct.

Now, to prove the absolute truth of everything we have said in this paper, we propose to place in your hands the means of proving for yourself that we have not claimed half enough. To any person who doubts any of these statements, and who is interested sufficiently to make the trip, we will pay all traveling and hotel expenses for a visit to this city, if we fail to prove any statement that we have made.

HOW TO SECURE A FORTUNE WITH OZONE. A test package of Ozone, containing a sufficient quantity to preserve one thousand dozen eggs, or other articles in proportion, will be sent to any applicant on receipt of \$2. This package will enable the applicant to pursue any line of trade and experiments he desires, and thus satisfy himself as to the extraordinary merits of Ozone as a Preservative. After having thus satisfied himself, and had time to look the field over to determine what he wishes to do in the future—whether to sell the article, or to combine it to his own use, or any other line of policy which is best suited to him and to his township or county—we will enter into an arrangement with him that will make a fortune for him and give us good profits. We will give exclusive township or county privileges to the first responsible applicant who orders a test package and desires to control the business in his locality. The man who secures control of Ozone for any special territory, will enjoy a monopoly which will surely enrich him.

Don't let a day pass until you have ordered a Test Package, and if you desire to secure an exclusive privilege we assure you that you may deprive you of it, for it is only to be had once. If you do not care to send money in advance for the test package we will send it C. O. D., but this will put you to the expense of charges for return of money. Our correspondence is very large; we have all we can do to attend to the shipping of orders and giving sent to our working agents. Therefore, we cannot give any attention to letters which do not order Ozone. If you think of any article that you are doubtful about Ozone preserving, remember we GUARANTEE THAT IT WILL PRESERVE IT, NO MATTER WHAT IT IS.

REFERENCES. We desire to call your attention to a class of references which no enterprise or firm based on anything but the soundest business success and highest commercial merit could secure. We refer, by permission, to the value of the Frédis Preservative, to the following gentlemen: Edward C. Boyce, Member Board of Public Works; E. O. Behlby, City Comptroller; Amor Smith, Jr., Collector Internal Revenue; Wilson & Cunningham, Attorneys; Martin H. Harrell and B. F. Hopkins, County Commissioners; W. S. Campbell, County Auditor; all of Cincinnati, Hamilton County, Ohio. These gentlemen are each familiar with the merits of our Preservative, and know from actual observation that we have without question.

The Most Valuable Article in the World. The \$2 you invest in a test package will surely lead you to secure a township or county and then your way is absolutely clear to make from \$2,000 to \$10,000 a year. Give your full address in every letter, and send your letter to

PRENTISS PRESERVING CO. (Limited) S. E. Cor. Ninth and Race Streets, Cincinnati, O.

E. T. Hollister & Co., Fruit and Produce Commission Merchants, 900 Broadway, St. Louis, Mo.

Wine for Sale. Concord, Catawba, Iowa Seedling, Virginia Seedling—all pure grape juices. A 50 gross and 100 gross. Will sell by the gallon or barrel. The wine is all warranted. 16-11 JOHN T. WALKER, Baden, Mo.

Western Fanciers' Agency, St. Louis, Mo., will buy, sell and exchange Fancy Poultry, Pigeons and Pet Stock. Fifty pair of fine game at greatly reduced prices. Grains for feeding poultry taken in exchange. Cash paid for red birds. 20-15

40 elegant chromo cards, new styles, 100-150 wanted. L. Jones & Co., Nassau, N. Y. 20-1500

Horticultural.

FLOWERS IN WINTER.

The cold winter days are here, and if there is a time when flowers are more acceptable than now, I am at a loss to say when that time would be. There are many flowers which can be grown quite successfully in the windows of an ordinary sitting room, and it is of some of them I would speak at this time. I always like to see plants growing in a window, for somehow or other it seems to me in the same abode will be found refined, kindly people; and whenever I find a single plant carefully tended in the window of some poor person, it brings back vividly to mind the calceolarias and geraniums one is almost sure to find in the windows of the homes of the laboring classes of Scotland and England.

In some parts of Edinburgh there will be found more poverty and squalor than one even cares to imagine, yet I remember one day, in returning from Holly-wood palace on a visit, purposely passing through a part of the "auld town" to observe some of the historical buildings. In the course of my travels I was surprised to see a beautiful geranium growing in an earthen teapot with the spout knocked off; a little further on, away up six or seven stories high, was a window completely embowered with nasturtium and convolvulus vines, and still a little further on was another window well filled with beautiful pansies—all of which set me to thinking that the love of flowers is as great among the poor as it is among the rich. But how I have wandered.

In the first place, in making a window winter garden, we select a window having a southern exposure; if that is not attainable, then get an east or west exposure. Then, take paste and strips of paper or, better, muslin, and carefully cover up every crack where Jack Frost would be likely to obtain an entrance. On very cold nights newspapers folded together thickly can be put on the window panes inside. There are many different ways of fitting up the interior of the garden, but for most people I would recommend a stand mounted on casters so that it can be brought nearer to the fire in real cold nights. The stand may be an old table or made of boards, but in whatever form, let there be sand strewn over the surface for the pots to stand on. Plants in the house suffer so much from dry air, that it is the reason I suggest the sand, because it is constantly giving off dampness. If it is not convenient to have damp sand, water may be evaporated on the stove; it is little difference how the damp air is secured, so you get it. Most window plants will flourish in a temperature of 75 degrees by day; 15 to 20 degrees less at night. Give air at every opportunity when the weather will admit. Do not be afraid to give them light. Fuchsias and rex begonias are partial to the shade, but they can be put among other plants. There are so many winter-blooming plants it would be impossible to describe them all in one letter. Let it suffice for me to name a few: there are roses, carnations, heliotropes, begonias, libonias, geraniums, lantanas, callas; and so I might go on and name ever so many.

Roses intended for winter-blooming must be grown in pots during the summer months, in order that they may form working roots. These are the little white fibres you see among the other roots, and are the chief feeders of the plants. When the roots have turned to a dark brown color, their day of usefulness is past. Florists probably sell more roses than any other plants, and because purchasers are not acquainted with the needed treatment, the leaves turn yellow and drop off, and the florist will be soundly berated as a swindler for selling unhealthy plants, which never bloom. To be perfectly successful with winter-blooming roses after they have left the greenhouse, the amateur florist must observe there are four essentials—light, moist air, proper temperature and water. Now let us see how they are grown by the florist and then endeavor, in our homes, to follow his plan as near as possible. Now, suppose you step into the greenhouse with me, in imagination. You see that the entire roof is formed of glass, that the sunlight may come streaming through. True it is, my friend, you cannot have a glass roof, but you can roll up your window shades and let the sun in. Warm in here! Oh, no, just right; only 70 degrees—and notice how moist the air seems, and how summer-like. But why do you keep the walks so wet? That is to produce this humid atmosphere. When we have a very hot fire in the furnace we throw water on the pipes; indeed, sprinkle it everywhere. Notice this contrast: flowers sitting in a kitchen window nearly always look well, while those grown in the parlor heated by a stove or hot air furnace whereon no water is kept to evaporate, will always be sickly. It would ruin our carpets, says one lady, to throw water among our plants. Yes, but you may easily make a plant stand from a shallow dry goods box, and keep the pots bedded in sand, constantly moist, and a pan of water on the stove. It is just as hurtful to our plants as to ourselves, to breathe that hot, dry air. Every plant cultivator should possess a thermometer to measure the temperature. Roses in the sunlight should have about 85 degrees, and about 20 degrees less at night. If the heat runs too high, open the windows; at the same time observe and maintain as even a temperature as possible—not roasting hot one day and freezing cold another. If roses are grown in a close, hot room, they will soon fall a prey to insects. If the

set in, and in both cases, the old adage truthfully remarks, "prevention is better than cure." Roses in pots should be sprinkled every day, but only watered at the roots when the surface is dry. By sprinkling I do not mean just a few drops of water spattered on your roses, but let them be plentifully syringed in the same manner you would like a cooling shower or bath on a hot summer day.

R. KENNEDY MCGILL.
Ainsworth, Iowa.

TIMBER CULTURE.

The Illinois Horticultural Society, at its recent meeting in Chicago, passed the following resolutions without debate:

Resolved, That the Agricultural Board of this State, be respectfully requested to prepare and publish reliable information on the following subjects:

1. Best varieties of trees to plant for timber in the different soils and locations in this State.

2. The practical results of the few timber plantations already made, as well as the growth of timber upon lands reserved for the purpose.

3. A careful estimate of profits to be derived.

4. Meteorological effects, together with such other facts and information as they can procure relating to the duty of Illinois farmers in the premises.

1. After listening to the excellent and practical remarks of Dr. Jno. A. Warder, found in another column of the RURAL WORLD, in his paper on forestry, where in he gives the natural habitat of all valuable timber trees, and points out the kinds to cultivate, the Illinois horticulturists call upon the State Board of Agriculture for information. If the case had been reversed, and the State Board of Agriculture had called on the horticulturists, it seems to me there would have been some fitness in the movement. Surely, every individual member of the Horticultural Society has his opinion on the subject, and would prefer that to the opinion of any or all members of the State Board. And in saying this, I do not at all under-value the knowledge of horticulture on the part of any or all members of the State Board, nor yet the fact that horticulture is embraced in agriculture.

2. Why not let the secretary of the Horticultural Society seek and compile the information sought? The State salaries him as well as the secretary of the Board of Agriculture. I should think Mr. O. B. G. would rather covet the honor and the task.

3. The profits can only be gathered from the owners of timber plantations, and the work of compilation should be added to that of the secretary of the Horticultural Society.

4. The fourth resolution covers a very wide field, and cannot be complied with except by years of experience, unless, indeed, we go to Egypt, where the government is expected to have some facts deduced from experience; or to Spain, where a total change of rainfall is noted as a result of denuding the country of timber. The government of Spain needed money, and caused the timber on the public domain to be cut and sold. Instead of gentle falls of rain as formerly, the land is now parched with drouth or deluged with cloud bursts, which washes or ruins the land. Again, I wonder that horticulturists (specialists) should be in favor of delegating their special work to the State Board of Agriculture. Much better would it have been, in my opinion—which is of little value perhaps—if the Horticultural Society had asked for a larger appropriation, increased the salary of its secretary, and placed the obligation and the work under consideration on him.

C. W. M.

Strawberries.

Mr. T. T. Lyon, in the Michigan Farmer, gives a summary of the discussions at the late American Pomological meeting as follows: The subject was introduced by an address from P. T. Quinn, of Newark, N. J., who commenced by saying that his views, as to the proper method of growing strawberries, had undergone a change within the last dozen years. He is now of the opinion that the best of soil and cultivation is requisite for the production of fine berries and profitable crops.

Until recently he had planted in summer, but now thinks spring planting more profitable. He gives clean culture till the middle of September and then mulches for the winter, raking off the covering in spring. He omits the use of horse power in cultivation during the year of fruiting, for the reason that the feeding roots come too near the surface, and would hence be too much disturbed by the cultivator.

He then described his mode of dealing with pickers, and stated that he had produced over 170 bushels from a single acre. He hoped next year to grow from 125 to 160 bushels from a single acre. It is his practice to test the promising new varieties. All things considered, the Charles Downing is his favorite, though Boyden's No. 30, (Seth Boyden), is popular with dealers. His last crop netted him fourteen cents per quart.

Mr. Quinn was followed by Dr. Hexamer of New York, who dwelt largely upon the value and importance of irrigation. He concurred with Mr. Quinn in a preference for spring planting, but thought Wilson one of the best shipping berries. For amateur planters he recommended the use of potted plants. In response to a question by a member he remarked that the Triomphe de Grand was one of the finest of shipping strawberries.

then reviewed. The consideration of the several varieties served to bring out prominently the fact that nearly or quite all the varieties are more or less local, so far as successful cultivation is concerned; a very few only proving satisfactory over an extended range of territory.

"Agriculturists" was not generally thought worthy of a place in the catalogue.

The Bidwell strawberry, standing near the head of the list, was soon reached, when B. Hathaway, of Michigan, who originated it, was found to be in the audience, and being called out gave a history of its origin and parentage, which has heretofore appeared in the Farmer, but which had been put imperfectly known beyond the limits of this State.

Black Defiance was commended as "best" for those who want a first-class large berry.

Captain Jack, one of the best market berries. Quite prolific.

Champion, a hardy, vigorous plant. Productive.

Charles Downing, one of the best of all berries for general use. Said to be liable to blight in some places.

Col. Cheney, good if well fertilized. Crystal City, a valuable early berry. Commended in Georgia, but not as good for shipping. Said to be poor and small on clay.

Crescent is very well able to take care of itself, has great vitality, is profitable for a near market, for those who are not very discriminating; for these reasons profitable.

Cumberland Triumph, one of the best, popular everywhere. A good shipping berry in Ohio; holds its size till last picking.

Duchess, an early berry; does well grown in hills.

Duncan, early and of very fine quality.

Forest Rose, under ordinary culture has not realized the anticipations of growers. Its foliage fails and the blossoms are tender.

General Sherman, poor in quality. Glendale, generally regarded as worth less.

Glossy Cone, fails under the influence of sun and drouth.

Golden Defiance, a fine, late variety, for home use.

Great American, variable and uncertain usually reproductive; very disappointing.

Green Prolific, very sure, prolific and profitable, for a near market. Some members suggested that it is no longer needed since we have the Crescent.

Henry Davis, a good amateur berry, does not bear heavy crops, but is of good quality.

Hovey's Seedling, originated fifty years ago, was the first hybrid strawberry of American origin; still retains its quality.

Jenny Lind, little grown outside of Boston and its vicinity.

Jucunda, once so popular, has ceased to be satisfactory.

Kentucky, is one of the best market berries in Arkansas, the late market berry of Ohio. It takes care of itself.

Longworth's Prolific, is the great berry of California.

Matilda, generally satisfactory.

Miner's Great Prolific, one of the finest and largest of all the strawberries.

Monarch of the West, uncertain, liable to be injured by spring frosts.

Newman's Prolific, the popular berry of Charleston, South Carolina, quality often poor elsewhere.

Nicanor, very early and hardy, some say earlier than Duchess and Wilson.

Pioneer, an early variety and a strong grower.

President Wilder, of the finest quality, under high cultivation, handsome and unsurpassed. It has stood for twenty years as one of the best in form, color and quality.

Prouty, superseded.

Rocky Hill Triumph, same as Cumberland Triumph.

Russell's Prolific, superseded.

Russell's Advance, of good quality; stands the sun well, hardy, soft.

Seneca Chief, little known; of no value.

Seneca Queen, of good quality, productive, uniform in size and shape, a little later than Duchess.

Seth Boyden's No. 30, (Seth Boyden), sweet, valuable in some places, especially with abundant moisture.

Sharpless, fruit not good in wet season; not satisfactory in Michigan, (this certainly is not so); large and prolific under good treatment; quality usually good, malapropos only when overgrown. The Massachusetts Horticultural Society gave it the first premium this year. It is less prolific the first season.

FORESTRY.

Dr. J. A. Warder, of Ohio, presented before the Illinois State Horticultural Society, a long paper on the varieties of trees best suited to the western prairies. He believed the establishment of a school of forestry would be to the advantage of the country. The government needed a corps of foresters to supervise and direct the management of the natural forests and public lands, while the great railroad corporations were beginning to create extensive plantations that would require skilled management.

The speaker proceeded to discuss the different varieties of oaks, and spoke first of the white oak, found everywhere in the timbered portions of the states east of the Missouri, and more rarely west of that river. This tree grows in various soils, but prefers a dry loam. Next in value came the burr oak, which thrives best on a clayey subsoil, in low situations, with abundant moisture. It grows rapidly, and forms a magnificent tree either for the park or the forest. The wood is used for staves, but its open texture makes these inferior to those made from white oak, which should be selected for tight cooperage.

The yellow oak reaches its finest proportions on the bluffs and river hills, and its timber is of the white oak class, and valuable for many purposes. The swamp white oak is found on the margin of ponds throughout Illinois. The post oak is common in southern Illinois, Missouri and Iowa, and sometimes attains considerable size. The red or black oaks are mostly found in the northern part of Illinois and adjoining states, and affect dry and sandy soils. Their wood is reddish, rather deficient in strength, and not durable when exposed to the weather. It can be used for dry cooperage, but not for casks intended to contain liquids. The black oak is a stately tree, and has been more famous for its bark, used as a dye-stuff, than for its timber.

The red oak is a tree of large size and rapid growth, and is found from the Atlantic coast to the western plains, and extends far to the north and south. The black jack has no special beauty, and is of little value except for fuel, and is found in southern Illinois. The Spanish oak is a closely-allied species of southern habitat, and attains handsome proportions. It is not suited to northern latitudes.

Hickories and walnuts have been condemned by some on account of their slow growth in their early years, making but scanty inches in height as poplars make yards of upright growth in the same space of time. The black walnut is of great value as a timber tree, and will withstand the climate of Illinois. It loves a deep, rich soil, and grows rapidly while young, but slowly thereafter. It requires from one to two centuries to produce the magnificent logs now in great demand, and generations must elapse before the artificial forests can replace the natural growth of this tree. The white walnut, a butternut, is perfectly hardy, and may be planted further to the northward, but is not likely to prove a valuable tree, though worthy of a place in the plantation.

The hickories are all more or less valuable, not only for the nuts furnished by some species, but because of the toughness of the timber. The large shell-bark forms the noblest tree, and one of great value. The pig-nut is one of the most handsome species, and makes a fine tree for the lawn or park. Its timber is used for spokes and bent wood. The shell-bark prefers flat lands with clay subsoils, and its wood is much used in the arts. The pecan, found on the Illinois river and southward to Texas, affects the rich, deep soils of river bottoms, and like the shell-bark, furnishes valuable nuts. Its timber is not so strong as that of other species.

Maples are worthy of a large share of the planter's attention. The sugar maple, or rock maple, is the prince of this genus. It is widely diffused, but prefers rich limestone soils—those that are naturally well drained. Its growth is slow at first, but the form of its spreading, but compact head, and its beautiful autumnal tints, render it a favorite avenue and lawn tree. The black maple is equally rich in sugar producing qualities. The red maple extends from Canada to Georgia, and is always found near water. It is well adapted for planting in village streets. The water or silver maple and the box elder are beautiful species, but scarcely fitted for northern Illinois. The sassafras is common in this State, and loves a dry soil.

The white and red elms produce valuable timber and are beautiful trees. The horse chestnut will grow in northern Illinois, and its magnificent blossoms make it a general favorite. The birches and alders thrive well in northern latitudes, and have not only beauty, but utility to recommend them. The birches have a very extensive range, and the wood and bark of many species are of value. The European alder grows by the banks of streams, and makes a good shade tree. The beech is a noble tree, and thrives best on clay subsoil. It abounds in some parts of Indiana, but is rare in Illinois. The white ash is in great demand for use in the manufacture of agricultural machinery, where strength and lightness are required. It requires rich, deep soil, well drained. The blue ash is an allied species, and almost equally valuable.

Dr. Warder went on to review the merits of a number of other forest trees, mostly of southern habitat, but occasionally found in this State, including the catalpa, persimmon, Osage orange, and others. He considered the poplars and willows valuable, as the pioneers of future prairie forests, from their hardiness and rapid growth and their capacity to resist the adverse climatic conditions of the open plains.

Dr. Warder gave a remarkably full exhibit of forest botany, showing leaves of eighty-three species and varieties of oaks, chiefly American kinds. Fifteen forms of burr oaks were shown, many of them very distinct. A classification was made in two great groups—the white oaks and the red or black oaks, these being again subdivided according

The Fish Pond.

Sam Subers' Fish Pond.

Mr. Sam Subers, says the Macon, Ga., Telegraph, has fully demonstrated the fact that a small fish pond dug in the middle of a garden is a source of much genuine satisfaction and profit. Of late years southern people have directed much attention to this branch of industry, if it may be so called, and all over Georgia can be found these miniature ponds of water, in which are raised myriads of fish at a cost next to nothing. Four years ago Mr. Subers had his little pond dug in his garden at about the expense of digging an ordinary well. He obtained a few fish from Mr. Singleton, a few from Mr. Wippler, and gave a colored man two dollars to bring him a black beam from the swamp. Then he shut his eyes for a year and a half, and waited for the fish to grow. And they grew, grew in quantity and size. The table was supplied twice a week, and he has kept up the programme at a trifling cost.

When the fish commissioners came along with their canisters of German carp, and the papers were full of their excellent eating qualities, he procured a few to stock his pond. They dived into the mud, and his hitherto clean pond began to assume the appearance of a mud puddle. The carp did not prove so valuable an eating fish as the bream, having much the flavor of catfish. But the bream, of which the pond has millions, is acceptable to all palates.

The expense of feeding these fish is really less than feeding a half dozen chickens, to say nothing of having the chickens stolen. Mr. Subers gave about twenty-five cents for a box of old worm eaten crackers, and they furnish excellent feeding. A few mulberries, with an occasional treat in the way of corn bread crumbs, is all that is necessary, and the fish go on growing and multiplying without end.

The fish pond is an institution to be encouraged. Every man who owns a garden can easily dig one, and as it keeps the surrounding ground always moist, it will be found a most valuable means of making garden truck grow. Think of brown-fried bream every morning for breakfast at a cost of only the salt that seasons them. Really, it is something worth speaking about.

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Man as a physical, intellectual, and moral being, becomes most completely developed in all his parts and faculties by using daily, at least, one dose of Brown's Iron Bitters. Many thousands are ready to testify that it is the best medicinal tonic in the world. It strengthens every part of the body, and exerts everything else in its soothing and refreshing effects on the whole general animal system.

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"How do you manage," said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, "and thus keep myself and family in good health. When I am well I always feel good natured." See other column.

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WEATHER--OR NOT.

We admire the philosophy of the unfortunate man, who, when everything had been swept away, said, "Well, there'll be weather and tag left, at any rate." Alas! weather is the "yellow dog" of all subjects; everyone thinks it his special right to try to better the weather, and hurra his anathemas against "Old Probabilities," and all who endeavor to assist him in regulating the weather. The following communication from Prof. Tice, of St. Louis, Mo., the renowned meteorologist and weather prophet of the West. It does not discuss the weather but something surer of more importance to those who suffer with that painful malady he speaks of: "The day after concluding my lectures at Burlington,



Iowa, on the 21st of December last, I was seized with a sudden attack of neuritis of the chest, giving me excruciating pain and almost preventing breathing. My pulse, usually 80, fell to 25; intense nausea of the stomach succeeded, and a cold, clammy sweat covered my entire body. The attending physician could do nothing to relieve me. After suffering for three hours, I thought—as I had been using Dr. J. C. Smith's good effect for rheumatic pains—I would try it. I saturated a piece of flannel, large enough to cover my chest, with the Oil, and applied it. The relief was almost instantaneous. In one hour I was entirely free from pain, and would have taken the train to fill an appointment that night in a neighboring town had my friends not dissuaded me. As it was, I took the night train for my home, in St. Louis, and have not been troubled since.

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Artichokes are grown more easily than potatoes, produce double the quantity per acre, and are valuable food for nearly all domestic animals. They are planted and cultivated like potatoes. Can be left in the ground where grown all winter, and are not injured by freezing when in the soil. They should be more generally cultivated.

Winter is the best season of the year for plowing orchards that are in grass or clover. The trees are in a dormant state, and are far less injured than when the plowing is done when the trees are in leaf. Orchards that have long been in grass are sometimes benefited by plowing—but when an orchard is bearing well, it is a good idea to let well enough alone.

We acknowledge the receipt of an invitation by Hon. Seth H. Kenney, president of the Minnesota Amber Cane Growers' Association, to attend the annual meeting of that society at Minneapolis on the 19th of January. We hope to be present at the meeting. The meetings of this association have always been large and instructive, and none who have attended them, have regretted the time and money expended.

The advice of the RURAL WORLD to everyone in the latitude of St. Louis, or south of it, having an ice house, is to fill it with ice whenever they can find it three inches thick the present winter. Indications point to a very open winter, and the first cold weather after this date that will give three inches of ice, should be improved to store away a supply of this important luxury. The RURAL WORLD has urged the construction of ponds to supply ice and fish, and those persons who have not got them, should construct them, and ice houses as well. Improve this open winter weather in doing it.

The continued pleasant weather has been of great advantage to stock. Indeed, it is generally in much better condition than it was in September. The rains have caused a continuous growth of grass, and where farmers have not overstocked, their domestic animals have got along well. Stock may be considered half wintered, and little has been fed to them from corn or crib. If the winter opens as the prospect now indicates, it will be a great advantage to growers, as it will enable them to get through by purchasing very little grain.

There is much more profit in selling hogs at nine months old, than will average 250 to 300 pounds, than in keeping them the length of time, and averaging about the same weight. It is no profit in keeping them longer, while there is in keeping them only half time. Hogs will increase in weight, if they can have liberal feeding, and when they do not increase day, there is a loss of all. Hogs and other stock eat their "heads off" if kept too long. Fatten as rapidly as possible.

S. O. Bonner of Edwardsville, Ill., asks what five varieties of apples we would recommend to plant for market purposes. We present him the Ben Davis, Rome Beauty, Smit's Cider, Winesap and Willow Twig. The only objection to the above list is, that all but the last variety might be classed as early winter varieties. The Willow Twig is a late keeper, and valuable on that account. If the grower proves itself to be productive enough for market purposes, it will be indispensable as a late keeper and will be the best market variety of all. The Little Romanite (Gillpin) is reliable as a late keeper.

We expect, of course, all of our subscribers to renew. If they take any agricultural paper, we feel confident they cannot get one at lower rates, or that contains more agricultural matter. But it would be a great personal favor if, besides renewing, each subscriber would get a few others to subscribe. We have added many thousands of subscribers to our list the past year, by the active efforts of our readers, and we desire to add double the number in the year 1882. Each reader can help do this, and it will be appreciated by us. One more issue closes the year, and the term paid for expires with many thousands of subscribers. We hope all will renew at once, before the printed name is dropped from the list. We assure one and all that the names of all who fail to renew promptly will be dropped. It would be fatal to any one publishing such a paper as the RURAL WORLD at one dollar per annum, to continue to send it af-

ter the subscription had expired. So, friends, one and all, remit at once and get a dozen to join you.

Shortage in the hog crop is every day asserting itself. There is a falling off at least of one-third from last year. This will make a good demand, and good prices for next year's pork crop. Farmers should take the best care of their breeding sows. Comfortable quarters should be provided for those that will have litters in winter or early spring. A little attention and a little extra feed will make a big difference in the number of porkers to be marketed next fall. With proper food and care, pigs dropped this winter can be made to average 300 pounds next fall, and such will command then over twenty dollars per head. This would bring big money to the farmer. Of course, a good clover field is a great auxiliary to the growth and fattening of hogs, and all hog growers should have good pastures for their swine.

We have received a report from President Green of the Fair Association, which shows the financial condition of that society to be highly satisfactory. There are \$30,000 in cash on hand, after paying all premiums and expenses of the past year. It is recommended that \$20,000 be used for the further retirement of the bonds. The St. Louis Fair is one of the great institutions of the country, and its annual return is looked for with great interest by millions of people. Rivals are springing up in other great cities, and our Fair managers must not fold their hands, but use renewed enterprise and zeal, so they may still retain the leading position on the continent. We are called old fogies in St. Louis, and in some respects we are; but when it comes to a great Fair, St. Louis eclipses anything on the globe. Let us continue to keep in the lead.

Our kind readers will please accept our cordial thanks for heeding our suggestion as to procuring new subscribers for the RURAL. Scarcely a renewal is made that is not accompanied by from one to a dozen new names. And the hearty endorsement, and kind promises of further work, in behalf of the RURAL, are very gratifying. If the increase in subscriptions keeps up till the renewal season is over, our subscription list will be doubled or trebled. Each reader can do much for a paper that meets his approval, if he will try, and the combined readers can accomplish wonders. So, friends, if each of you will do your best—if each will make it his business to send even one name, and then as many more as he conveniently can—the combined effort will accomplish a grand result. And that is what is being done, and we are profoundly thankful for it. But there should be no delay. One more number closes the volume. Renewals should be made at once by all whose subscriptions close December 1881, so the name may not lose its place in the mail list, and thus avoid mistakes and delay. There is no better time than the present, to do work that needs to be done now. So, readers, one and all, let us hear from you now, NOW.

Not until preparing the index for the thirty-fourth volume did we comprehend the great number and variety of articles published in the RURAL WORLD in a single year. This volume, if it has been preserved, is worth ten dollars to any farmer as a book of reference. Hardly a topic of interest to the farmer, relating to agriculture, horticulture, cattle, horses, sheep, swine, poultry or the apiary, that cannot readily be referred to, saying nothing of the Home Circle and other departments. Some publishers of agricultural papers, on account of the great labor, trouble and expense of getting up a carefully prepared index, omit it entirely—but farmers frequently want to refer to matters of importance without wading through the entire volume, and this they cannot do without an index, but with it they can readily turn to any topic they desire, in a few minutes. The next number—the last of the thirty-fourth year and volume—will contain a well-systematized, carefully-prepared index, each subject arranged under its proper department, to make it easy to refer to. All the numbers of the year should be put together in proper order, and stitched together, if not bound. Those who have been remiss in saving their numbers in the past, should turn over a new leaf in the future. They will be found worth preserving.

One valuable lesson learned by the farmer the past season was, that the early planted corn gave the best crop—in fact, in many cases, the only crop. The same lesson has been taught before—in fact, is taught nearly every year. The early planted corn gives the largest, heaviest ears, and the best yield. Even if cut back by frost, it does not change the result. Last year, in addition to the drouth, chinch bugs were very destructive. They could not harm the early planted corn very much, because it was too far advanced; but the late planted, in its succulent condition, was just what they wanted, and they sucked its substance out of it. In all probability we shall not for many years have a season so favorable for the propagation and depredation of the chinch bug, but it should be anticipated, nevertheless. To be forewarned is to be

forearmed, and hence farmers should be prepared to plant their corn earlier than usual. This open winter favors them. All the plowing for next spring's crops should be done this winter, so that sowing seed and planting seed can be done in early spring. Even if the ground is wet, it is not injured if plowed in winter. The frost pulverizes it, acts upon it beneficially, and prepares it for the seed and future crop. It is in much better condition to receive the seed than if plowed in spring; for the thawing and freezing have disintegrated and mellowed the soil, and made a better bed for the seed. Winter plowing is much better than fall plowing, because the heavy fall rains settle and compact the soil, while the winter plowed lands escape the fall rains upon the upturned soil. The teams are strong, the weather cool and invigorating to man and beast, and there is ample time to do the plowing well. Plowing can also be done deeper in winter, as, if the clay is turned up, it is pulverized by frost and prepared for seed growth.

Letter from Florida.
COL. COLMAN: With thanks for past publications, allow me to correct one mistake, to-wit: my letter as published states that seven-tenths of the lands in Manatee and Polk counties, Florida, are susceptible of profitable culture. It should have read three-fourths. The remainder is of little utility, or value, except production of grass for grazing purposes. Heretofore, growing of cattle has been the great business of this country. Experience has demonstrated the fact that orange culture is far more profitable than stock raising or common farming, as real facts will show. We are forty miles from a shipping point, and oranges have to be hauled on wagons that distance.

The Albritton Grove, situated 45 miles east of Palmetto and 40 miles southeast of Tampa, consists of forty-five trees from seven to fourteen years old, and occupying less than a half acre of land. N. S. Albritton, county commissioner, is its owner. His post-office is Fort Green. He has contracted his crop at \$5 per 1,000 on the trees, purchaser picking them, and paying cash as they are loaded on wagons in the yard. This is the off year, and hence he only expects to gather about 700 to the tree, which will equal \$3.50 per tree, or forty-five by \$3.50—\$157.50 for crop. Last year same trees averaged over 1,000 to the tree, and he has great reason to think that next year they will average 1,500 to the tree, and be worth \$7.50 per tree at present price. But we think we will have a railroad finished near us next year, and the oranges will in that case be worth \$10 per 1,000 on the tree, or \$15 per tree. If so, next year's crop will bring him (buyer picking), forty-five by \$15, \$675 off of half an acre. He has 1,000 acres just as good for oranges as the half acre.

K. FERGUSON.
Fort Green, Florida.
Prof. M. A. Scoville, of the Illinois Industrial University, and Mr. Henry M. Beardsley, of the Champaign Sugar Manufacturing Co., start for Louisiana Wednesday with a view to investigate the sugar works of that State, in order to avail themselves of all the advantages and improvements now employed there in the construction of their large works this season at Champaign. This shows clearly the value of a joint co-operation between the north and south as has been urged by Mr. Hedges.

President Hodges has just received a communication from James F. Griffen, secretary of the Louisiana Sugar Planters' Association, announcing the appointment of the following sugar planters as delegates to the Mississippi Valley Cane Growers' meeting on the 3d of January:

T. W. Nicol, Folsom Hope, Iberville Parish.
Leonice Somat, Bayou Bourla, Iberville Parish.
J. J. Brown, Allen, West Baton Rouge.
John W. Dougherty, New Orleans, West Baton Rouge.
Jno. Hill, Baton Rouge, East Baton Rouge.
Adam Thompson, New Orleans, Orleans.
Henry Bonabel, New Orleans, Orleans.
Ben. Gibson, Donaldsonville, Ascension.
R. T. Hanson, Donaldsonville, Ascension.
Bradish Johnson, New Orleans, Plaquemine.

AMUSEMENTS.
Frank Mayo has brought to St. Louis one of the most complete legitimate companies ever seen here, and they are presenting a fine round of the legitimate this week at the Olympic. Next week Sol Smith Russell, the great humorist will appear in "Edgewood Falls" introducing his famous specialties.

Tom W. Keene is now recognized as one of the leading American tragedians, and certainly his renditions of "Richard" "Macbeth" and "Rochester" have thus far been splendidly given at the Grand Opera House, and his programme for the balance of the week is very interesting. On Monday, December 26th, Main's Comic Opera Company will begin a season.

The success made by the Boston Ideal Company is well deserved. It is an immense company, and is presenting a series of light operas at Pope's to very brilliant success. Next week Oliver Doud Bryll, will appear in his great sensational plays, and on Monday December 26th, will give away 5,000 presents to the little ones.
At the People's Theatre, Messrs. Hyde & Beaman's fine company have made a sterling success "Maldon's Pantomime" is very funny and draws crowded houses. Next week Leavitt's Gigantic Minstrels will commence an engagement.

Society Meetings.
Indiana Poultry Association, Indianapolis, January 4th to 11th, 1882.
Mississippi Valley Cane Growers' Association, St. Louis, January 3 to 5, 1882.
National Agricultural Convention, Washington, D. C., January 10 to 17.

Those of our readers who desire to possess a cheap and substantial wire fence, should send for circulars on this subject to Messrs. Herbert & Gould, of this city, who are making a very desirable fence that is much in favor with those farmers and stock men who have either used, or seen the fence put up. Note the advertisement on another page.

A fowl raiser recommends tobacco smoke as a remedy for gapes in chickens. He puts the little biddies into a small box, covers it with a pane of glass, and blows in the smoke until they become very sick, repeating the process a second time if the first does not prove sufficient.

An Indianapolis exchange mentions that St. Jacobs Oil cured Mr. J. H. Mattern, a letter-carrier of that city, of a severe sprain, contracted in the war.—Detroit (Mich.) Western Home Journal.

We call attention of our readers to the advertisement of D. F. Beatty of Washington, N. J. He is one of the largest manufacturers of organs in the country, and any goods ordered from him will give satisfaction.

A German Canary, imported and warranted, excellent songster, will be forwarded by express promptly on receipt of \$3. Address, H. Roesch, the St. Louis Bird Fancier.

The Shepherd.

Edited by R. M. Bell, of Brighton, Massachusetts, to whom all matter relating to this department should be addressed.

The National Association of Wool Manufacturers, held their annual meeting at Boston, October 5th, 1881. Rufus S. Frost of Boston, was elected president, and John L. Hays of Boston, secretary.

How many men have gone to Kansas to farm and failed through failures of crops, from the various mishaps which come to that beautiful country? How few have failed to make a success of sheep raising in Kansas, has been the remark of every observing man of Kansas industries? Had the emigrant been content with less capital in land, or had he let his sheep eat other people's grass rather than his own, the investment of his means would have been profitable. Kansas is a stock country. Stockmen do well there. Thousands of young men have put their all into the land, and missed three or four crops to find they were bankrupt.

Lombria.
The Texas Wool thinks the ailment of our northern lambs is the same parasite known to their flocks called lombria, the Spanish name for worm. Such a query we had for years. The difference of climate would make some differences in symptoms and speedy results. In their climate, developments are much more rapid than in our climate. If an animal does well there, it does wonderfully well. If it does badly, it dies soon.

Certainly the intestinal parasites of this country in sheep, demand scientific investigation and treatment. The annual losses and enfeebled condition of flocks, ought to find prompt relief. The guess work system has been tried long enough. We ought to begin to know something definite about it.

Luck.
DEAR RURAL: I do not think that the word "luck" should belong to the flock-master's vocabulary. There may be bad breeding, bad feeding, bad care, and bad management generally, but not bad luck. If sheep are bred, fed and cared for in an intelligent manner, by a shepherd who has a love for his sheep, and puts his whole mind into his business, there will be no such thing as bad luck about it. When he buys his sheep, he will select them with skill and judgment, he will feed them generously, and with a bill of fare varied as often as possible; he will see that they never suffer for the want of water; will have shelter for them in inclement weather; will fold them at night in a fold that is dog proof; will do all he knows to keep them right, and will have no such word in his vocabulary as "bad luck." His sheep will not be troubled with stretchers, or any other disease, brought on by bad feed and neglect. On the contrary, his lambs will come strong, his ewes will have plenty of milk and not disown their lambs, none of them will be stunted and weakly, a large percentage of them will not unaccountably die, but his heart will be made glad, seeing them flourishing in health and beauty. In short, since he discarded the word luck, his heart, flock and pocket will expand in pleasing union.
Cadet, Mo. J. G. BARLOW.

H. B.: The Texas Wool is a monthly paper devoted to sheep and wool enterprises in Texas, and is interesting and applicable to all sheep men. It is worthy of patronage. Price \$1 per year. Address, San Antonio, Texas.

Mr. H. J. Chamberlain, of Williamson county, Texas, had on exhibition, at the Atlanta Exposition, a very fine Merino buck fleece, weighing 41½ pounds. Vermont sheep men will be coming to Texas for their rams before many years.—Texas Wool.

Men engage in sheep raising for the purpose of making money. The purpose breed of sheep is already to hand, without beginning a new breed as so many begin at once to produce. Experiments cost money in sheep as well as other enterprises. Begin where other men have gotten to.

Emigrate.
That is, if you are a poor man, and have any "get up and get" in you. It will require some nerve, and pluck to be sure to pull up stakes among your neighbors and relations, and go out to form new social relations among a people you never saw. But good people are everywhere, and you will find your kind any place you go to in this world.

If you are a man of large means, moving to a new country is no big matter. You will miss many of the sharp corners, and money will make money as you know well enough. Nothing succeeds like success. Money represents success, and always finds the little margins wider, sometimes too wide, and takes it all for profit, which is mean. A new country has more of these chances than an older country. Why? Because, poor men in going to a new country, forget the rigid economies, or never had them at home. And the first thing they know, the new systems and adaptations to the new country, which they have failed to learn and use, change all plans and expectations. Crops have missed two, three or four times, and unless backed by money they are busted.

Emigrating used to mean a great deal more than it does now. A decent man, now, to go to a new country, must go on the cars. Not a second-class car either. It must be a chair car. Two or three trips must be made to the railroad office, to secure six or eight chairs together for the whole family. The teams, wagons and furniture must go on the cars. To them, it looks like the best way; but it is truly style, and expensive style at that as a poor man could put on.

Then the emigrant must go to a home near the railroad, and as near as possible to a town. A country seat if possible, even if he must go in debt some on his farm. Here is one of the very surest means of fastening debt upon a man for life. A new country has many lessons for a man to learn. He is sure to follow the methods he learned back at the old home of doing things, and some of them do not suit everywhere. Americans particularly do not learn to go slow until they learn. They pitch in, hit or miss, and when they miss, they do not take the blame on themselves, but leave it all on Providence, luck, or on the country. While beside them is a Dutchman or an Englishman, who are considered poky, but really not only stay but make money, and are contented and happy.

When it is necessary for a poor man to emigrate for the benefit of himself and family, nothing is more necessary than that he consider himself poor, and come to bed rock on style and expenses, and adopt the plan of pay as he goes for everything. Better buy forty acres and pay for it, than buy 640 acres and pay half down. Better buy half as much land as he can pay for, and have money to put into stock raising, than risk everything on raising corn and wheat, which are uncertain. Risks are to be avoided from every direction possible.

But of all the risks, don't risk ending your days in the poor house, by staying on other people's land until you are too old to take the risks of a new country, where you can get a home for yourself and children.

Wool Market.
Walter Brown & Co., of Boston, Mass., under date of December 10th, 1881, say:

There has been no material change in the wool market during the present week, rather more manufacturers have been examining the stock offering, and the transactions are perhaps more in number, although for domestic, they are less in the aggregate amount. The disposition on the part of some holders to keep stock moving has, during the past two weeks, led to some slight shading in prices, but from the general strength shown by most dealers, we are led to believe that wools that are off in price from quotations of a month ago, are also somewhat off in condition as well. As corroborating this view, we note sales of choice XX and above Ohio fleeces at 45 cents while other transactions of the same grade are reported at 42½ cents, which would indicate that buyers are willing to pay previous prices for a choice article.

The foreign market continues favorable for a strong market. The sales in London are progressing without any evidence of weakness, and indicate on any purchases for American account, a cost laid down in this market, above our present current quotations. While manufacturers have had on hand a fair amount of raw material, it is generally believed that they are not overstocked, and with a supply of wool at the seaboard and in the interior, which is not likely to exceed the consumption of the next six months, it does not seem probable that values are likely to depreciate materially during the remainder of the season.

In unwashed wools there continues to be a fair demand with sales at previously quoted rates. For good medium grades, the inquiry is somewhat improved, with the prospect of a more active demand in the near future, and the present basis of values being well maintained.

Territory wools are in good request; the large sales of these wools during the past few months has materially reduced the stocks on hand, and it is probable that the wools remaining unsold, will all be wanted at full values as the season advances.

As the year draws to a close it is usual to experience a quiet market, and it is probable that for the remainder of the month the volume or transactions may be comparatively limited, but we see no reason to anticipate other than a firm tone to values with an active trade within the next sixty days.

Mr. G. L. Chismann, of Independence, Mo., has made a purchase of ten head of the fine Oxfordshire sheep which Mr. R. C. Estill recently imported, the importation embracing over forty head. Mr. Chismann was in Kentucky in attendance at the first series of Short-horn sales, and calling on Mr. R. C. Estill, who breeds Short-horns as well as sheep, was, as the purchase made was, greatly pleased with what he saw. Mr. Chismann has obtained most of the foundation material for his Short-horn herd in Kentucky, and hardly a year passes that he does not visit this commonwealth and buy some of the very best. His herd now numbers between forty and fifty head.

The Cattle Pard.

In-and-in Breeding Short-Horns.
The following, taken from "Carr's History of the Killerby, Studley and Warlaby herds of Short-horns," although not new to old breeders will be instructive to young ones who seek information on the subject of in-breeding:

Few people have any idea of the amazing extent to which in-and-in breeding was carried on by the Colling Brothers; and so great was the complication it involved, that few of those who know the outline of the circumstances can adequately realize all their intricacies. It is almost impossible to describe even proximately in some of its stronger features the system they pursued. But the attempt ought to be made; for the Messrs. Collings' system of in-and-in breeding is not only one of the most remarkable and authentic cases in the history of the reproduction of animals with which we are acquainted, but the earlier Booth bulls were amongst those most strongly subjected to its influence.

Mr. Colling's bull, Bollingbroke, and his cow Phoenix, were brother and sister on the sire's side, and nearly so on the dam's. They were of the same family; and the only difference in descent was, that Bollingbroke was a grandson of Dalton Duke, while Phoenix was not. But this apparent difference, slight as it is, was not all real; for Dalton Duke also contained some portion of their common blood. Arithmetically stated, the blood of the two being taken and divided into thirty-two parts, twenty-nine of those parts were of blood common to both, rather differently proportioned between them. Phoenix had sixteen of those parts, Bollingbroke thirteen; the latter having also three fresh parts derived from Dalton Duke, which made up the thirty-two.

Being thus very nearly one brother and sister, they were the joint parents of the bull Favorite. That bull was next put to his own mother Phoenix, so nearly related to him on his sire's side also; and the produce was young Phoenix. To this heifer Favorite was once more put, she being at once his daughter and more than one sister too. For their two sires—Bollingbroke and Favorite—were not only as nearly as possible consanguineous with each other, but also with the cow Phoenix, to which they were both put. The result was—Comet.

Nor was this all. The system was carried much further. The celebrated Boeth bull Albion was not only a son of the in-and-in Favorite-bred Comet, but his dam was a granddaughter of Favorite on both sides, and descended besides from both the sire and the dam of Favorite.

It is not so possible to make an exact statement with regard to Pilot, for it is not known whether he was by Major (398), or Wellington (680). Nor does it much matter; for five-eighths of Major's blood were derived from Favorite, by repeated inter-crossings; and Pilot's dam was not only by Favorite but she was also the granddaughter of Foljambe, the sire of both the parents of Favorite.

Marshal Beresford was, like Albion, a son of Comet; and his dam was by a grandson of Favorite out of a daughter of Favorite.

Suworow was by a son of Favorite, and his dam was a daughter of Favorite; and Twin Brother of Ben was from a cow by Foljambe, the double grand-sire of Favorite.

Even this does not exhaust the subject. Many of the above mentioned animals were otherwise related to each other by a common descent from Hubback, and from other progenitors.

Albion has been called "The Alloy Bull." I think with very little reason. When it is remembered that he is the seventh in descent from that blood, and that therefore one part of his blood came from "The Alloy," against one hundred and twenty-seven parts which were not derived from it, the chances against either good or evil resulting therefrom were infinitesimally small; and so no doubt such an acute observer as Mr. Booth well knew.

Corn-fed Stock.
Mr. B. F. Johnson, of Illinois, a well known and intelligent agriculturist, contributes to the Rural New Yorker, an article on corn feeding from which we make the following extracts:

There is no manner of doubt but an exclusive, or nearly exclusively corn diet lessens the vitality, invites disease, and finally destroys the constitution of the progeny, but also produces butchers' meat of an inferior quality compared with that made of more nitrogenous foods.

Within fifty years and since the settlement of the west and the increase in the production of the cereals, and notably Indian corn, the food material for the making of fat has increased out of all proportion to that class of vegetation which makes bone, flesh and muscle; and without becoming justly sensible of the fact, we have gone astray in putting on fat at the expense of lean, and to the serious damage, not only of the health and constitution of the animal, but to the lessening of the value of the meat, in the case of butchers' stock, and destroying the health of such of our stock as are used for breeding and work. The consequences are dear beef and pork and cheap tallow and grease, if not lard, and the appearance of a new class of diseases in farm stock of all kinds. It was a natural thing, of course, that after long centuries of feeding, during which the most costly and difficult thing to get was fat, when we suddenly became possessed of the material to furnish it at low cost, we made use of it in an extravagant way, and that the result should be as we see; but now that the mistake has been forced on our attention in a hundred ways, the correction of the abuse will come in due time, and just as a matter of course.

And hence we hear of more grass, roots, vegetables and milk for hogs, and barley, oats peas in place of Indian

corn; and for sheep and neat cattle, winter pasture which is everywhere easy to be made on all the blue grass soils south of forty degrees. Of course, the return to the medium between the two systems will be low, and corn will always hold a prominent place as the chief and leading grain in fattening butchers' stock; but it will soon come to be recognized that for breeding stock and for young animals the less corn they have the better, where a vigorous constitution, sound health, prepotency, and long life are sought.

Texas Cattle.

The scarcity of heavy Texas hides is getting to be a source of anxiety to tanners, who want to get out heavy leather to answer the prevailing demand. The improving of herds has been going on for some time on the cattle ranches, and the long-horned, scraggy Texas steers are getting scarcer every year. There is more system pursued in raising cattle. Crossing the breeds, gives finer stock and better meat, at the expense of the hide, which in best-bred animals is finer, and does not make so thick leather. New ranches are stocking, and as the facilities for the business are practically limitless, both in point of territory and the readiness with which stock can be marketed, the future of the trade is a bright one. There has been a marked improvement in prices for the medium drive, as compared with prices paid a year ago, in all the classes from yearlings to three-year-olds, the advance being nearly 50 per cent. At points on the Missouri river, where range cattle are marketed, dealers have experienced great difficulty in supplying good stock, and orders for cattle, that are peculiarly adapted for ranging, are being received at points remote from the usual markets. All these encouraging indications of prosperity conclusively prove the utility of exercising judgment in selecting stock, by which a high grade of beef cattle can be cheaply raised, and also demonstrate that Texas will retain rank at the head of the beef producing States—American Cultivator.

Some Principles in Breeding.

Mr. J. Howard, M. P., of England, says: From my own observation, from conversations with the late Mr. McCormick, and comparing notes with other breeders, I have come to the conclusion that the following cardinal points in the art of breeding have been fairly established:

1. That from the male parent are mainly derived the external structure, configuration and outward characteristics—the locomotive peculiarities inclusive.
2. From the female parent are derived the internal structure, the vital organs, and, in a much greater degree than from the male, the constitution, temper, and habits.
3. That the purer the race of the parent, the more certainty there is of transmitting its qualities to the offspring. Say two animals are mated; if one is of purer descent than the other, he or she will exercise the most influence in stamping the character of the progeny, particularly if the greater purity is on the side of the male.
4. That, apart from certain disturbing influences or causes, the male, if of pure race, and descended from stock of uniform color, stamps the color of the offspring.
5. That the influence of the first male is not unfrequently protracted beyond the birth of the offspring of which he is the parent, and his mark is left upon subsequent progeny.
6. That the transmission of diseases of the vital organs is more certain if on the side of the female, and the diseases of the joints is on the side of the male parent.

Enzootic Ophthalmia.

Last August I bought three heifers, one of which was blind in one eye. It appeared swollen and of a light color. At the time I supposed it was caused by a blow or hurt of some kind. Since bringing her home, all the cattle I had at that time (five in number), except one cow, have been affected in the same way, one cow having been entirely blind for nearly a month. She is beginning to be able to see some now. What is the nature of the disease, and how shall I treat it? I have twenty feedings, one of which has already been attacked.—L. D. S., Lincoln, Neb.

REPLY:—The disease of the eyes is a form of ophthalmia, which has prevailed to some extent, generally during the summer months, more or less extensively in various sections of the country, during the present and previous years. Among the preventive measures, we have on former occasions recommended removal to other pastures, and separation of diseased from healthy stock. As the sun light should be avoided in all cases of diseases of the eyes, because it aggravates the evil, and retards recovery, the affected cattle should be housed during day time, but may be given liberty on an enclosed pasture during the night, where they can not communicate with healthy cattle or sheep. In the beginning of the disease, it is proper to give a laxative dose of medicine. To each animal over two years old, give a pound and a half, to those under two years old, one pound, and to younger ones, according to age from four to eight ounces of Epsom's salt, dissolved in from a pint to a quart of water, and to which solution add from one to two ounces of ground ginger. Give soft or slop food, among each ration of which add a teaspoonful of saltpetre. To the base of the horns, or otherwise, fasten a few folds of linen cloth, in such a manner that they hang down over both eyes, reaching a few inches below them. This should be kept wet during the day with a lotion composed of an ounce and a half of sulphate of zinc and three drachms of carbolic acid to each gallon of rain water, which should be thoroughly stirred before application. The disease often terminates in supuration of the eye, leaving a scar or cicatrix, which seldom disappears. After recovery it will be proper to keep the cattle for some time, say during two weeks, away from other cattle. The shed or stable where they have been while diseased, should then be thoroughly cleansed, disinfected with

chloride of lime solution, and white-washed, and should not be used for at least a month thereafter for cattle, or sheep.—Prairie Farmer.

Money in Steers.

It has been clearly established that it pays 30 per cent. more on the investment to have steers ready for market at two years old than it does at three years.—Iowa State Register.

Certainly. And it is one of the excellencies of the Jersey steer—thoroughbred grade—which our dear old friend always takes pleasure in berating, that it does mature a year earlier than that of any other breed. It is claimed by Mr. Stuart, of Illinois, that the Jersey steer comes to maturity earlier, with less feed, and makes a finer article of beef than any other. It is said of the great adversary of the human race, that even he is "not so black as he is painted." So the little Jersey steer is not so worthless as he is sometimes held to be. In fact, it is beyond dispute that he fattens easily, makes choice beef, and weighs more than even an expert in handling cattle would estimate him from his looks.—Chas. Aldrich.

Dutch Friesian Cattle.

H. Langworthy of West Edmiston, New York, gives the following account in regard to the manner in which his Dutch Friesians were received at the Minneapolis exhibition last September:

The first show was at Minneapolis—an exhibition which has become one of the most important in the United States. It was planned on a magnificent scale and every department filled. At the outset, our cattle were met with a protest against their exhibition in the class denominated Holsteins. It was signed by four exhibitors—Mr. A. V. Ellis from Minnesota, Dr. W. A. Pratt and Messrs. Severy & Sons from Illinois, and Thomas B. Wales, Jr., secretary of the Holstein Association from Iowa. This protest set forth that our cattle were not Holsteins, not being recorded in the Holstein Herd Book, and therefore not entitled to exhibit in that class. The substance of the reply was that probably no cattle on exhibition were really Holsteins; that the majority of the animals of the protestants were Dutch or Friesian cattle; that they had assumed, and received by public consent, a name not belonging to them; and that the Dutch Friesian Herd Book was more careful in its registry, and therefore was of equal if not of superior authority to the Holstein Herd Book, on questions of purity of blood. The decision of the board of officers was against the protestants. On entering the show ring, the Dutch Friesians were awarded both first and second herd prizes, first prize on bull three years old and upward, first on bull two years old, second on cow three years old, first on heifer two years old, and first on yearling heifer; also second on heifer two years old. At the grand sweepstakes for dairy breeds, this herd also took the first prize in a show of twelve herds.

Protracted Calving.

Please inform me what to do in case a cow is very slow in calving?—P. A., Leavenworth, Kansas.

If the labor be protracted by the throes or pains decreasing in strength and frequency, and the powers of the animal seem to fail, we may have recourse to the ergot of rye, which appears to possess a specific stimulating influence over the uterus. Two drachms doses, combined with half an ounce of caraway seeds or pimenta, given in half a pint of ale, may be repeated at intervals of from half an hour to an hour if required. But there are many circumstances which militate against its use. Thus it should never be given where there exists any natural effect in the pelvis or soft parts of the mother. The presentation of the calf should be natural, and no necessity existing for any change in its position; and the mouth of the womb should be sufficiently dilated and relaxed; in fact, no obstacle to delivery should exist. All medicinal agents may, however, fail from the large size of the fetus, and we should then be justified in assisting nature; and if the fetus is so situated as to enable us to reach it, by steady traction applied at the legs, we may succeed in effecting delivery. If this be unsuccessful, from the force required, attach a rope to each leg and the lower jaw, and by the aid of an assistant, delivery will be effected. We need scarcely describe the position of the calf in a natural presentation. The fore legs should present themselves with the head resting between them; and in cases of unnatural presentation, which are very common in the cow, one broad principle should always be our guide. By manual examination endeavor to ascertain the exact position of the fetus, and then exert our ingenuity to bring it into its proper position, or one as favorable for delivery as possible. Prairie Farmer.

CATTLE NOTES.

A stock yards company has been organized at Topeka, Kan., with a paid up capital of \$100,000.

American beef is selling on European markets at from 12 to 13½ cents, and the supply is not equal to the demand.

Far-seeing farmers in many portions of Nebraska are borrowing money on land, and investing largely in blooded cattle.

King Kalakana, when in this part of the country recently, bought several Kentucky thoroughbred horses and colts, which will be forwarded to Honolulu.

Capt. Kennedy, the great cattle king of southern Texas, says there is no truth in the report that he has sold his great ranch. It was reported that he had accepted \$1,000,000 for his interests.

The following from the Industrialist, organ of the Kansas Agricultural College: "Our Angus cattle thrive beautifully in their new homes. Nothing on the farm has so far done so well as our doddies; and no breed that we have ever had upon the College farm has received so much attention and favorable notice from visitors as our Angus beauties."

Among the members elect of the Iowa Legislature was the Hon. Phny Nichols, of West Liberty, Muscatine county, who is one of the best known Short-horn breeders of the State, and a cultivated gentleman. Mr. Nichols is a

prominent member of the State Breeders' Association, an organization containing many scholarly and influential gentlemen, who have made it the leading organization of its kind in the west.

There are some common sense tales in fattening the stock the value of which every farmer must acknowledge. The animal must be comfortable and contented to do its best. To insure this condition they must have plenty of good, clean water, easily accessible to drink, plenty of good, palatable food which they can eat in quietness and undisturbed, besides having quiet, pleasant companions in the field that do not hook or bite.

The Horseman.

A Stake for \$30,000.

Mr. Charles H. Raymond, the owner of the great Kentucky bred three-year-old, Phil Thompson, called at our office, says the Turf, Field and Farm, in relation to the match proposed by Mr. E. S. Stokes. He said: "Judged by the record, Phil Thompson is both a faster and a gamer trotter than Mr. Mackay's Sweetheart. His record of 2:21 was made early in the summer, in a third heat, in a race with four-year-olds. In the first heat he was required to score eleven times, and in every heat he had to fight for position. This performance stamped him as anything but a quitter. Sweetheart, when he scored 2:22, had nothing to bother her. It was an exhibition, and she was encouraged by a horse galloping at her heels. On the second attempt she trotted in 2:22, and on the third attempt she dropped back to 2:24½. The insinuation, therefore, is entirely gratuitous, that Sweetheart is a gamer performer than Phil Thompson. You are correct in saying that I have faith in Phil Thompson. I believe in him, but it is a little too early to talk about making a match for next year. I want to see how my colt passes through the winter before I make an important engagement for him. To put up now a forfeit of \$5,000 would be equivalent to betting that amount of money that no accident will happen to my colt during the winter months. I am not a betting man, and I do not care to gamble on this sort of thing. In April or May I will accommodate Mr. Mackay with a match, provided my colt is in good health at that time. I will trot the race at Chicago in July or August, and I will not object to other colts, then four-year-olds, coming in at \$5,000 or \$10,000 each. The estimate of Mr. Stokes for expenses is entirely too high. I will allow him \$1,000 for bringing Sweetheart from California." "But how about gate money?" we asked. "The race I presume, will draw, but I do not wish to give anyone an opportunity to say that the main thing in view is a division of gate receipts." Mr. Raymond weighs his words well. He believes that he has the best three-year-old of 1882, and he hopes to show the best four-year-old of 1882. Fred Crocker, it is asserted, will be all right next year. If he should come out in good form we can see no reason why Gov. Stanford should decline to put him in a race with Phil Thompson and Sweetheart. A trotting contest between four-year-olds for a stake of \$30,000 and gate money will attract the attention of the country, and the winner will reward his owner with world's fortune. The great question to be decided is whether the palm shall be awarded to California or Kentucky as a breeding State.

How to Judge a Horse.

The weak points of a horse can be better discovered while standing than while moving. If he is sound, he will stand firmly and squarely on his limbs, without moving any of them, the feet planted flatly upon the ground, with legs plumb and naturally poised. If one foot is thrown forward with the toe pointing to the ground and the heel raised, or if the foot is lifted from the ground and the weight taken from it, disease may be suspected, or at least a tendency, which is a precursor of disease. If the horse stands with his feet spread apart, or straddles with the hind legs, there is weakness of the loins, and the kidneys are disordered. Heavy pulling bends the knees. Bluish or milky cast eyes in horses, indicate moon blindness, or something else. A bad tempered horse keeps his years thrown back. A kicking horse is apt to have scarred legs. A stumbling horse has blemished knees. When the skin is rough and harsh, and does not move easily and smoothly to the touch, the horse is a heavy eater and his digestion is bad. Never let a horse whose respiratory organs are at all impaired. Place your ear on the side of the heart, and if a wheezing sound is heard, it is an indication of trouble—let him go.

The Pig Pen.

SWINE NOTES.

A smoke-house should be well ventilated, and the hams hung at least eight or ten feet above the fire, and the smoke given out in moderate quantities, and come from corn-cobs and hickory wood. It is important that the hams be kept cool and dry through the whole operation. Proper ventilation of the smoke-house secures this. If they become moist by improper ventilation, or are placed so near the fire as to be heated, their flavor is greatly injured.

D. A. Furnas, Danville, wants us to ask our readers if any of them ever knew a hog to have the cholera while being fed with the slops from a sorghum field. He has fed his hogs upon this refuse during the fall and says they are exceedingly hearty, and in fine condition, while the hogs of his next neighbors have been dying with the disease. During the summer his pigs had the run of the orchard, and his theory is that hogs thus treated will not take the cholera. We would

like to have all the testimony on the question that our readers can bring from their own experience.—Indiana Farmer.

An Iowa farmer put up twenty one-year-old hogs for fattening, and for the first twenty days fed them on shelled corn, of which they ate eighty-three bushels. During this period they gained 887 pounds, or upwards of ten pounds to the bushel of corn. He then fed the same hogs for fourteen days on dry corn meal; during which time they consumed forty-seven bushels and gained 155 pounds, or 11½ pounds to the bushel. The same hogs, next fed fourteen days on corn meal and water mixed, consumed 55½ bushels of corn and gained 731 pounds, or 13½ pounds of pork to the bushel. He then fed them fourteen days on corn meal cooked, and after consuming forty-five bushels of the cooked meal the hogs gained 799 pounds, or very near fifteen pounds of pork to the bushel of meal.

Dr. Commons, at the last meeting of the Indiana State Medical Society, read a paper on hog cholera as the result of trichinae present in the animal. He did not claim this theory as a demonstrated fact, but having made the subject a special study, he felt convinced of its correctness. In every case of dissection after death by cholera, he had found intestinal trichinae, and the conclusion reached was that the disease was a result of their presence. The intestinal trichinae are the progenitors of, and are much larger than the trichina spiralis which penetrate the walls of the stomach, and eventually find lodgment in the muscles. Hence it is that the flesh of a hog, sick with cholera, may be eaten, and the contraction of trichinosis avoided, while, at the same time, intestinal trichinae are the cause of the animal's disease. It is only when the flesh containing trichina spiralis is eaten that the disease known as trichinosis is communicated. It is well established, that all flesh-eating animals are subject to this disease. Dr. Commons says he has found trichinae in rats and chickens, and even in fish reared in artificial ponds. This is a subject of interest and importance, and the theory advanced by Dr. Commons should be so thoroughly tested as to fully substantiate it or completely explode it.—Southern Planter.

DR. HUNTER INTERVIEWED.

As there has been so much discussion of late respecting the causes, effects and proposed cures of the diseases of the throat and lungs, and desiring to get at the bottom facts respecting these diseases, our reporter called on Dr. K. B. Hunter, with a view of getting a knowledge of what the specialists in this line of the medical profession considered as the best mode of treatment for bronchial affections, for it is a well-known fact that opinions differ, and that most widely, which difference is oft caused by the doctors not having made the branches of the curing art a special study, which being an utter impossibility, gives the man who does make one branch a special study, a prominence in that one branch over the rest of the profession, who being jack of all trades are master of none, fully, which many of us have learned to our cost when too late to change advisors.

Medical science is of such a wide range of subjects, that of late years, the profession has seen the wisdom of its members taking up the study of special diseases as almost an exclusive study, whereby the science of the art of curing is more rapidly advanced, and is made more wonderful and certain in its operation. Hence it was that our reporter called on a specialist who devotes his time in the study of the diseases of the throat and lungs, who by long experience and close observation has proven himself to be a very successful practitioner.

The Doctor has an office at 704 Olive street, where he was found busily employed correcting the proof sheets of his new book on this very subject.

On stating the object of the visit, the Doctor wheeled his chair up to the stove, threw himself back into an easy attitude, and delivered himself of a lecture on the subject in question, which the following is a synopsis:

It is far easier to prevent consumption than to cure it. And the only way to prevent it is to protect the lungs from irritation. Every cold, case which tends to irritate the lungs tends to produce tuberculosis, and is liable to end in consumption. Sometimes a cold falls neither upon the nose nor throat, but directly on the lungs, producing what is known as a cold in the chest. When this is the case one of two diseases always results. If it falls upon the air tubes it produces bronchitis. If it falls upon the chest it produces pneumonia.

Every cold which falls on the chest produces more or less bronchitis or pneumonia, and is dangerous to life just in proportion to its intensity. In no case, however slight, is such a cold free from danger. If the inflammation which follows is severe, death may result from the acute attack.

When a cold on the chest does not end in actual inflammation, the cough, pain and oppression gradually disappear. Nothing remains beyond a slight hacking, and the occasional expectoration of small quantities of tough jelly-like mucus. This is known as a chronic inflammation of the bronchial tubes, called chronic bronchitis.

The bronchial tubes are the air ducts of the lungs, and lie entirely within their substance. They form, in fact, the main bulk of the lungs. Were it possible to separate them and the air-cells remain, they would terminate from what is called the substance of the lungs, there would be nothing left except a little cellular tissue and the blood vessels and nerves.

These tubes of the lungs are lined by a mucous membrane of great delicacy, which has the power of absorption and secretion to a wonderful degree. Now, the secret of bronchitis is in this mucous lining, and the effect disease produces upon it is to inflame it, cause it to swell so as to narrow the caliber of the tubes through which the mucus is secreted, and to cause a secretion which still further obstructs these essential air passages.

There are various forms of this disease, but the most dangerous is consumptive bronchitis, so called from its close resemblance to consumption. The cough is more continuous than in ordinary bronchitis, and is usually troublesome in the morning. The matter expectorated varies, being in some cases sticky and small in quantity, but more commonly copious and of a light straw color or yellowish green. It usually sinks in water, neither entirely floating like ordinary mucus, nor sinking to the bottom like pus. Streaks of blood sometimes make their appearance in the sputa; and now and then cases occur in which it has a disagreeable smell, as of wet mucus. In other cases there is a fetid odor in the expectorated matter little less offensive than that caused by destructive mortification. There is not usually much pain, unless when the cough becomes violent, and then there is a feeling of soreness under the breast bone, or in the side. The breathing is more frequent and shallow than in health. The pulse is more rapid, appetite capricious, sleep restless, and there is loss of both flesh and strength. The surface and extremities of the body are easily chilled, and on very slight exposure the patient takes a fresh cold. Then the expectoration becomes clear and frothy, and shortness of breath increases. It is commonly in one of these stages the patient dies. On examining the lungs we find the mucous membrane softened in the larger tubes, and inflamed and congested in the smaller tubes and air-cells. There are no nodules or tubercles. There may be necrosis of the membrane. But the general structure of the lungs is not involved. Death has taken place simply from obstruction of the bronchial tubes and air-cells. It is essentially a local disease. In most instances the patient dies, because nothing effectual has been done to remove the obstructions in the air passages within the lungs. He literally dies from suffocation, being too much exhausted to expectorate.

Another form is called dry bronchitis, because the secretion is scanty and thick. The matter expectorated is jelly-like, of a bluish-white or a pale gray color, very sticky and difficult to raise. The lining membrane in this form of bronchitis is inflamed, swollen and thickened to such a degree as to diminish the inside space in the tubes. The smaller tubes are often completely closed with sticky mucus, and sometimes a tube of considerable size is entirely sealed up so that no air can pass. This is the most insidious of pulmonary complaints. The patient is not at the outset alarmed by any startling cough or expectoration. He may perhaps, hack slightly, and raise a little bluish-white mucus. This he may consider merely a nervous or stomach cough. The cough is not directly thought of as his ailment. Presently the breathing becomes shorter, particularly on ascending an elevation. This is followed by a sense of oppression after exertion, or a slight exertion. At intervals the cough becomes more severe, and comes on in paroxysms. The inability to take cold increases, and every change of weather is felt most sensitively. Often the shortness of breath induced by these changes becomes almost asthmatic in its character.

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ANNOUNCEMENT.

YOUTH'S COMPANION.

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William Black,	Canon F. W. Farrar,	Rev. Charles Thwing,
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Henry Ward Beecher,	"Ruth Chesterfield,"	H. H. James,
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Harriet Prescott Spofford,	Rev. M. M. Jones,	Charles Thwing,
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If one searing of the budding horns of young cattle will put a stop to the growth of the troublesome, ugly and dangerous excrescences, and divert the material used for them into some preferable channel, by all means let the practice be introduced. There is no reason for objection on the score of cruelty. It may give a little pain for a short time, such as all animals, ourselves included, experience scores or hundreds of times in the course of life; probably less than is caused by branding, and certainly less than some other ills that cattle flesh is heir to. But it remains to be seen whether an ugly, distorted growth would not ensue—less dangerous but very unpleasant to see.—Quint.

Send for circular of new style of Hopper Scale with leveling attachment. Borden, Selleck & Co., St. Louis.

Home Circle.

PLANTS.
THE HOME CIRCLE. A subscriber in Nebraska asks me to put her primroses in a pot. She is able; has tried to grow them in the amount of moisture required for other plants, and it failed to grow under that treatment; then she tried more water, keeping the soil wet all the time; for awhile it improved, but is again on the sick list, and now she comes to me for help. I imagine she has that little primrose planted in an eight or ten-inch pot and set at some distance from the rays of the sun. Am I wrong? A four-inch pot is plenty large enough for a blooming primrose. I have them now in small, two-inch pots, where they have been all their short, sweet lives, and they are now showing their first blossom buds. They were planted in soil composed of leaf mold and sand; this will not pack down and become hard or hold water any length of time. I give them a soaking each evening, but as I do not use saucers, the surplus water soon runs off. Another very important matter is, to have them sitting up close to the glass. Lookland wishes to know something about tuberoses—if they can be bloomed outside of a greenhouse, and if the temperature of an ordinary flower pit be sufficiently warm. If the heat does not go below 50 degrees at night and runs about 70 degrees at mid-day, they will do well. As to their blooming outside of a greenhouse, they are very easily grown in any window, provided the heat is from 50 to 70 degrees. In a future letter I hope to give full directions for the culture of this very popular flower.

A lady asks what varieties of plants are best suited for a hanging basket, and what care they require. To me a well-filled basket is a joyful sight in the winter. Not many know that the care of a basket is much less in winter than in summer, when the hot, dry winds dry one out so very quickly. Always avoid placing them in a current of air or too near the stove. On washing day set the baskets, plants and all, in your tub of suds for a few minutes; then wash off with clean water as needed between times. There are many plants that will grow and do well in baskets, and among the number is the *Othonna Grassifolia*, a fine plant for hanging baskets. It hangs very gracefully over the side of the basket, and its small, round, fleshy, succulent-like foliage glistens under the bright sun. Saxifrage *Sarmientosa* is another, which is sometimes called beefsteak geranium. Then we have the three sorts of *Tradescantia* or *Wandering Jew*. *Kenilworth Ivy* is a favorite basket plant with many. To those who like a vine to climb the chains, nothing will do better than *Madera vine*. We have a pretty plant—I have at this moment forgotten its Sunday name, but for every day we call it *Mock Strawberry*. I would not advise the planting of more than two or three kinds in a single basket, as we must give ample room for the plants to grow.

I will mail any of the basket plants mentioned for two letter stamps. I have many other questions to answer, but as this letter is already long, they must be deferred until next time.
 J. H. PEARSON.
 Alnsworth, Iowa, Dec. 13.

Letter from Bon Ami.

DEAR RURAL: Mutato Nomine, I am very glad indeed that you have "returned to your first love." Now that you have come back, you will be a regular contributor I hope.

I have had a deal of fun in the last six months. I got tired of complimenting and being complimented, so I concluded to act the critic a while just for fun. Since then I have been a central figure. People are as quiet as lambs, so long as you compliment them; but when you criticize, they spring up like disturbed hornets. To be known as a writer of profound judgment and delicate taste, all you have to do is to give everybody a fine "puff." It is the easiest thing in the world. No merit is required.

As to Guyot and myself, we are "self-constituted." If any one else is amused at our archery except ourselves, it is entirely an incidental matter. One of the most delightful books I have read lately, is Prof. Coit Tyler's *History of American Literature*. Two volumes of this invaluable book have been published, bringing the history down to the close of the second colonial period, or the year 1765. This is probably the best book on the subject. Prof. Tyler visited all the larger libraries in the east, and obtained all the information possible concerning his subject. He tells us, in his preface, that he will, as soon as possible, complete the *History of American Literature* to the present time. He has an interesting subject, and he treats it in a lively, yet scholarly style. For instance, when reading about the poetry of the Puritans, one must laugh all the while.

Another interesting book I am now reading, is Von Holst's *Constitutional History of the United States*. Von Holst is a German, and is, as might be expected, impartial. If one is interested in constitutional history and American literature, he could not do better than to get these books.

The best weekly paper I am reading is the *Nation*—politically and literary—published in New York. Typographically the *Nation* is perfect. The *Atlantic Monthly* is the best literary magazine in America, and for this reason, I like it better than any other. I like *Harper's Monthly* and the *Century*

Magazine, but I can't say that I very much admire their pictures. Those who do not read these magazines, may get a fair idea of the pictures, by taking an ordinary picture and blur it with ink, so that you can scarcely see it represents a man. If you do this, you will have a masterpiece of some old artist.

I have recently subscribed for *Littell's Living Age*. I am very much disappointed. It is not what it is represented to be. From reading its deceiving advertisement, one would suppose that the best of living authors write specially for its pages, but such is not the case. It costs you \$6 a year, but does not contain as much, or as good matter, as the *Century Magazine*.

Valley, many thanks for your pity. It is very true, as you say, that "everybody seems to be against me." Some writers have been very free in expressing their opinions, since Col. Colman said he would not again publish an article of mine on the subject—just as those behind breast-works are more at ease than the fellow who performs the office of target, out on the open ground. All I have had to do of late is to remain idle and admire their bravery. They strike me with as much impunity as the boy in the presence of his "big brother," strikes his rival.

Daisy, "what are we here for," as Flannagan said, but to have fun? Do you expect me to be as serious as the minister, who is trying to save souls from "fire and brimstone"? If I could persuade myself that my articles would have any effect upon the opinions of my readers, I might always speak seriously. Some of our members write as though they verily believe their articles will revolutionize modern thought. As for myself, every year I am more content to amuse myself, and leave the science of education to others. I generally find more amusement in debate than in anything else, and it does not make the least difference with me, which side I am on—just so I am opposed to everybody else. I find pleasure in defending opinions which no one else would hold.

Letter from Walnut.

Thanks, Daisy, your compliment is appreciated. I thought Cousin Kate's letter, and the editor's remarks, desiring to make the *Home Circle* more home-like, were the death blow to future argumentative letters; but here are two ladies, Lily and Daisy, who want to hear more about the "downfall." What do you think of that, Cousin Kate?

Daisy says, referring to the writer, "I wish he would return and defend himself." Well, Daisy, I am in the same boat with myself—the editor has it. I wrote that "defence" months ago, but doubtless the Colonel thought it was "too good for anything," so gave it to the office boy to kindle the fire with.

Now, Daisy, if you think you can stand it to wade through two solid columns of "defence" of the signs, just beseech the Colonel to publish it for your special benefit. I am sure he is too gallant to refuse your gentle request. What signs do you regard as "not altogether correct," Daisy? Most writers have simply given their ideas as to the probability of the downfall, without any arguments, pro or con.

Mutato Nomine, my experience is like yours. One may find time to read on the farm, after the day's work is done, if he will. Reading is one of the most refreshing and delightful of recreations for the mind, when weary in body.

Daisy, the next time you wish to go walnut hunting, come to my cottage with some of our friends, the more the merrier, and I will give you all a rare good treat. Don't forget to bring Nina, and especially her doctor, for he might be of some use, since the former is such an expert at cracking walnuts.

Lloyd Guyot is the Mark Twain of our Circle—always so jolly and good natured.

Letter from Barbara.

Col. Colman and friends of the happy Circle, will you admit a little country girl? I will stay close up in one little corner, and I won't make any noise. I have for some time been reading many interesting letters with much complacency. It makes one feel rather disconcerted to come among so many good writers, especially any one like myself, for I have never attended school long enough; but what I have come to tell is this, I am a regular little cook. I can cook a good dinner, just as quick and as good as most any one, and I can do any kind of housework, such as making beds, sweeping, ironing, churning, sewing, cleaning up the kitchen, &c. Once in great while I beg mama to let me milk the cows, which is my chief delight. I am preparing to be some pretty little farmer's wife. But am I making too much noise?

Cousin Kate, I have a Cousin Kate living near Norborne, Mo.

Paulus, I admire your letters. We don't live very far apart I think. You said a great deal about the Clarksville convention, and the Buffalo girls. I don't remember exactly what it all was. I have a great many friends and relatives living all around that little one-horse town (Edgewood), but I didn't go to any picnics near there.

What has become of Fannie Wood? I admired her letters so much. It seems as though she has entirely deserted the Circle. Perhaps she has joined the matrimonial circle. This seems to be the case with a great many. Fannie, I think you might visit that Circle once in awhile, if I have any right to ask you.

Little Dick, I like your letters. How I sympathize with Idyll and Gertrude's friends! But yonder they shall see with a purer, clearer vision than mortal ever was blessed with, and they

will behold the face of Him who doeth all things well.

Hope all mistakes will be excused. I have to run and get supper before the men folks come.
 BARBARA.

Letter from Beulah Belle Baum.
DEAR HOME CIRCLE: How vividly we recall old associations by some trivial occurrence. I accidentally saw the *RURAL* of December 1st, the first copy of the dear delightful paper I have seen for about four years. The first thought that occurred to me was, dear old Calamity's terrible experience with Mary Jane, and our matrimonial trouble. The old writers will probably remember. By "old," no insinuation is intended as to the age of the writers, but in the sense that we all use in speaking of times past.

The lively spats, fights, fun, advice on proposals of marriage, refusals of the same, &c., intermixed with recipes for corn dodgers and other substantial, altogether making things instructive, amusing and pleasant, and having a good time generally once a week. But the scene changes. We lose sight of these things, though they go on as usual. We miss them too, for a while, but other objects claim our attention and we seemingly forget all about them. So the years roll on with once in a long while a desire filling our breast to know if things go on the same in the old places. What exquisite pleasure stirs our heart when we see one of the old associations or anything relating to them. How clearly it all surges to our minds and we live over again, in our thoughts, the sweet old days.

A short time after reading the paper I saw one of the week previous. Almost the first thing read was Clislie, wanting to know what has become of Beulah Belle Baum. Who can describe the intense feeling of pleasure we experience at being remembered after many years, when we thought we were forgotten? Thank you, Clislie, for your kindly remembrance.

Some of the old contributors still write, but the majority are strangers to me. We must act the same as a promiscuous company thrown together without introduction with this advantage, we can talk without having to say, "beg pardon, but I can't recall your name."

Merry Christmas, yes, with extended hand, let me wish all a merry Christmas after such a long absence; and what better time could one choose to renew old friendship? Let us all, in this happy, peaceful Christmas time, extend our hand in friendly greeting and wish good will to all mankind, and woman-kind too, of course, for who could possibly slight the dear creatures?

What between the meeting of Congress, electing the speaker and trial of that wretched Guiteau, we have been kept in a perpetual state of excitement for the past few weeks. That horrid assassin causing the utmost indignation of all, by his insolence to every one, interrupting witnesses and judges, when anything fails to please him. His disgusting talk of the divine inspiration to commit such a dastardly deed, he continually keeps before the public. But this is a subject that every one has had a surfeit of, as the daily papers teem with every trifling detail.

Our beautiful little city is ready for its winter campaign. It is fast becoming the winter resort of the country. We can only boast of two respectable theatres, but have first class attractions at all times of the season. Then the musicals, lectures and other halls, concerts, &c., are enough to give all the amusement one could wish for. What is known as the social season is about to commence when the receptions and balls of the "upper ten" will be in full swing until the Lenten season casts its gloom on all festivities.

The White House has been thoroughly renovated, and the president has moved from his temporary abode in the Gray House, as the mansion of Senator Jones has been named, since the president lived there. Everything is said to go on at the White House as smoothly as if the president had lived there all his life.

The question that is agitating the massive brains of the ambitious newspaper scribes, is who is to be the first lady in the land? The only way to find out is to wait patiently until she arrives and then we shall know for certain.

Again, merry Christmas and a happy New Year! With a whole string of good resolutions that are kept, and volumes of new pages that are never turned.
 BEULAH BELLE BAUM.
 Washington City, D. C., Dec. 12.

Letter from Laura.

DEAR HOME CIRCLE: I am a stranger to all of you, and have come to ask admittance to the *Home Circle*. I have for a long time thought of joining your cheerful company, but have always felt a delicacy in doing so. I, like Nettie H., am easily frightened, and if you criticize me too severely, you will not hear from me again. I have written several letters for the *RURAL*, but have neglected to forward any. I have had but little time for writing this fall, but I expect to start to school in about a week, then I will have more time for writing. When I attend school, I devote my whole attention to study, writing letters and compositions.

Those who have lost dear friends, have my sincere sympathy. But a short time ago, death visited our household and carried away a brother—affectionate, loving and kind.

My favorites have always been Nina and Bon Ami. Of course, I like all the members; but when I speak of my favorites, I mean those I most admire. After reading this over, my first impression is that the editor's waste-

basket will find a place for it. Now, Mr. Editor, please be kind enough to publish this. If you thought half as much of this as I think of your paper, you would never think of throwing it into that ravenous old waste-basket. Criticism seems to be the order of the day. As this is my first letter, I will do no criticizing. With a polite bow to all, I will close.
 LAURA.

Dressing Children's Feet.

I could not help but say to myself this afternoon, as I have many times before, as I passed along the street: "O constancy, what a jewel thou art!" when I saw the children, girls from 2 to 12 and boys from 2 to 6 dressed in mittens, hoods, scarfs, overcoats, heavy woolen clothes entire except, from the knee down, only a thin woolen or cotton stocking, just the part that needs the warmest, dryest protection—that which is the farthest from the furnace of heat, where an extra thickness is needed to keep the blood from being chilled until it reaches the body again. Why is it, oh why is it, that parents will continue to do this and weaken the constitutions of their children, while they are just forming—not having any too good a foundation in the first place to build on this throwing upon the world generation after generation, one still physically weaker than the other.

Mother's so long as your girls travel the same road to school that your boys do, give them equally as heavy shoes; if they have to go through mud, and snow, give them rubber boots (to be worn only out of doors); they need them just as much as the boys. Get their shoes with wide soles, and broad, low heels. If your merchant knows that is what you want, and will have, you will have no difficulty in getting it. Oh, what a train of evils these narrow soles, peaked-toes, and high heels do bring with them, of weak ankles, weak spines, nervous headaches, to say nothing of bunions, corns, &c. Too small a shoe retards circulation, and this disarranges digestion which disarranges the entire machinery of the entire system.

Again, there is no ease in one of these unnatural shoes, throws the body out of its equilibrium, and it destroys all the natural grace. It is such a rare sight to see a lady walking easily and gracefully down street—that I have turned to look after. Besides the advantages I have named, the foot looks smaller in a broad sole shoe. If a shoe is too short and too narrow, the toes push up, the foot spreads over the sole and makes the sole look big, while if the shoe be large enough to let the foot rest naturally in it, it will look smaller.

Make the children undersuits of cotton or wool flannel to come down inside their stockings, into the tops of their shoes, and this too inside a warm woolen stocking.

Pro Be No Pub Li Ko.

Valley goes what is Murphy? Well I ain't dead nor asleep, but I hed better be both. I've bin passin' threw sum meere trying vicissitudes, & I feel kinder duty bound 2 give an excuse fur mi absents in 2 the home Sirkle. I hev 37 good excuses 3 wit, 1st the editor heathrode mi E pistols in 2 the distended bottomless stumick uv his wals Basket. This puts me in mine uv a lawyer hoo was apperin in Kort fur a Kriminal hoo was out on a bail, he sed he had 10 excuses 2 sho why the prisoner was absent, 1st he sed the prisoner was ded, then the Judge tole the lier or lawyer I mean to drap the other 18 excuses. So I guess I hed better do sum draping 2. Sumtimes even I think bout havin all uv the mass uv sweet morsels contained in mi E Pistols (the result of midnite toil) bein throde in 2 the wals basket I kinch mi fistes so tite it nearly givs me the lok Jaw in 2 mi fingers, & then I think of the Raleroode wood redac the fair 2a price I kood indure I wood go 2 Saint Lewis on a kind uv a reveng Seekin ture & ide knock that ole wals basket in 2 a million attims an stamps it olekraw til thar wood not b a peas uv it lef big a nuff fur a hors blanket, ide jist as liv b wawkin kross the Miss Slippi river on 2 the ice & hev it brake thru as 2 hev mi editoreels throde in 2 it, the basket, wish I was editor uv a papir I woodent serpress talant ide encourage it.

Wel I lass rit uv I was kontemplatin marryin, but I was halten 2ween 2 the grass widdy certainty & Nina a uncertainty, wel uv I give (9. a) Nina uv & tuck the widdy, the worst chois I ever maid, I was jis bodilyationly kivered under a ovelanch uv trubul & 1 kalamity after nuther in quik succession folloed, luv wont hide everthing luv wont kiver er wals no more than u kin kiver pikes peek with a postige stamp. She wood kook pise ever meal, she wood kil a chicken ever da, she wood put sugar in nearls ever thing, she deat per-serves & pi & cake & drink the kream of the milk all tween meals, she did not like kornbread & woodent eat pumpkins r turnips I am ussely as wite & doile as a mole but I aint no millonier & I kouldent kiver the widdy staid I kiked out the traces & sent er off 2 a er muthers people, & I klaimed I was desirted & I cent 2 Shikago 2 the divorce factory & got me 1. & nough I am on 2 the markit, ladies dont rush in 2 fast fur ule awl git a chanta.

Nough Kousin Kate dont tri 2 pear like u ar wild & dont want men in 2 the hoam Sirkel, kum Katie I like u & alwals did I wont handel u ruff like Walnut did I now u like me a little dont v?

Mutato nomine kinder hits bak wen the editor feeds the wals basket on his fodder good, good, good, misera likes kumpany—dont rita such good letters ita the best children that di 1st. (Oh Miss Lucy, Lucy Long).

I would like to say a phew words 2 meny moora uv the hoam Sirkel but I dont want 2 git thins mixt 2 much u c I am keepin batch & ef I dont minelam

a fred fle git frustrated, I went too bake a pumpkin pi & I furgot 2 put in the botim krust.
 I was goin 2 giv a splended invallayable reseat but will git it nex time twiterlyng thine.
 MURPHY JR.
 Irvin P. O., Ealinois State, 1800 & 81.

Letter from Lily of the Valley.

Our *Home Circle* seems almost deserted. For the last week, there have been very few letters. Are you all visiting? Christmas will soon be here, the very time for family sermons. And I hope all the contributors will "rally" for the Circle. The long winter evenings will afford us so much time to enjoy the letters, that it is a disappointment to see only a few familiar faces. I call the letters faces, for they are as true an index of our character, as our faces are; the thought that lives in our deed struggling into birth. It is with our thoughts as with our flowers, those that are simple in expression, carry the seed with them; those that are double charna the eye, but produce nothing are soon forgotten.

I have been anxious to hear the conclusion of the contributors, in regard to the "album." I think it would be a nice arrangement. It would be a treat to take a look at the many fair, and handsome faces it doubtless would contain.

Alberta, I would like very much to see you without going so far as St. Louis, and think I will give you a call, the first good sleighing we have; if you will give me that more direct road, a line directed to the Lily of the Valley, Lexington, Mo., will reach me; then perhaps I can reach you. I live several miles from the moorlands, and Y. G. has not found my home, perhaps has not tried. Now will you gratify my curiosity, and tell me something of Y. G.

Since writing the above I have had a late *RURAL*. Lloyd is at the front for gallantry. No wonder you are getting to be such a favorite. Lloyd, why don't you make a mistake and send Col. Colman one of the other letters, we would enjoy it so much.

Daisy, I am sorry the Colonel is so partial; we all would enjoy your letters just as well as he does, I hope you will find that Walnut. I believe Sallie Hoskins is jealous of Walnut, she writes like a preacher, and I think she will turn out to be a "Solomon," as the other Sal did. But she writes splendid letters whoever she is.

Clislie I do not know who made the mistake, perhaps I did, I know I am not perfect. Type does well to bear his own errors; we will bear part; or he could not stand it. If you were in this vicinity, you would think I did not miss it much, when I forgot to "hood" the men, for the ladies have such a mania for hoods, that there would not be zephyr enough to supply them all.

Nonaka you Garland hunting? I am getting jealous. Nina, Idyll, Daisy, Yamma, and many others, I hope to meet you all very often. Lena R., I think I could find your house quite easily.
 LILY OF THE VALLEY.

Letter from J. Jay.

Some one has said "Our wishes are but prophecies, our ideals, the measures of ourselves." Is it true? I have a longing to learn to paint, but have not the pecuniary requisite. However, this afternoon I borrowed my little brother's twenty-five cent box of paints, and attempted to paint a wild rose on a white porcelain lamp shade. As the pink petals formed beneath my not very artistic touch, I grew more confident of success, and boldly dotted the yellow centers, imagining the pollen would powder my nose should I smell of this dainty rose. Forming another rose, I joined them to the same stem, and made a branch of three leaflets. When finished, I contemplated it with satisfaction, but from the diversity of opinions expressed by the members of the household, I can form no estimate of its intrinsic worth or artistic merit. For example, at the tea table I was asked by my elder sister, what the design was intended to represent! But a young brother consoled me with "You're as good as a whole brass band," that evidently, embodying his idea of perfection.

May that little branch be a prophesy of my future success! My ideal is higher—"something more exquisite still," and I believe it measures the level to which my mind has been raised. It is the outgrowth of the development of my faculties, and of the education of my sensibilities, enabling me to perceive and appreciate the beauties of nature and art. I think it is Longfellow who says that

"Men may rise, on stepping stones
 Of their dead selves, to higher things."
 It is my nature to be easily discouraged, and it is such grand, good thoughts as these I need constantly before me to cheer me.

Only two creatures can surmount the pyramids—the eagle and the snail. "Perseverance almost equals genius in its results." I often think of our modern Miranda, Rosalind Young, of Pitcairn Island, of whom you have all heard. She has made the best use of all her talents, with her limited advantages, and to day her literary attainments are of a broader and higher character than those of the average seminary girl.

And such lines as these, by Ella Wheeler:

"There is no chance, no destiny, no fate,
 Can circumvent or hinder or control
 The firm resolve of a determined soul.
 Gifts count for nothing, will alone is great,
 All things give way before it, soon or late,
 What obstacle can stay the mighty force
 Of the soul-seeking river in its course,
 Or cause the ascending orb of day to wait?"

Each will-born soul must win what it deserves.
 Let the fool prate of luck. The fortunate
 Is he whose earnest purpose never swerves,
 Whose slightest action or inaction, serves
 The one great aim.
 Why, even Death stands still
 And waits an hour sometimes for such a will."

They lift one up, give one nobler aspirations,
 And fill one with a desire to "Do noble

deeds, not dream them, all day long, and thus make life, death, and the vast forever one grand sweet song." Am I welcome to the Circle?
 J. JAY.

REMARKS—Certainly.

The Menasha (Wis.) Press says: A. Granger, Esq., of this city, uses St. Jacobs Oil on his horses with decided success and profit.

NOAH WEBSTER.

Valley, you said you believed I was mistaken or a little wrong in what I said about Webster in my article on phonetic spelling. I beg leave to submit the following, as proof that I had good authority for so speaking:

When Daniel Webster was in England he called on Lord Brougham. He was treated very coolly by his lordship, and after his departure a mutual friend asked Brougham why he had been so discourteous toward the great American orator and statesman. "Great Jupiter!" exclaimed Brougham, "was that Daniel Webster? I thought it was that fellow who made a dictionary and nearly ruined the English language." Lord Brougham was one of the founders of the *Edinburgh Review*, and one of the most distinguished men of his day. This little anecdote will serve to show how Webster's dictionary was received in England.

The next man whose evidence I wish to get is Archbishop Trench. Just here let me remark parenthetically that if Guyot had ever heard the name of this distinguished writer on the English language, he would have known it was simply a typographical error, when his name appeared in the *RURAL* as Archbishop French.

Trench says: "While Webster's dictionary is scanted of the barest necessities which such a work should have, it affords in about a page and a half the following choice additions to the English: Zeoliform, zinkiferous, zink, zoophytological, zumosimeter, zygodactylous, zygomat, with about twenty more."

It may be thought that English scholars are prejudiced against this dictionary because it is an American work. Well, let us see what some of the American scholars say.

Mr. Swinton, an eminent author of text-books, speaks somewhat at length of the errors of Webster, in his "Ramblings Among Words," but I have not space to quote his language.

I shall next quote from Edward Gould's work entitled "Good English." "The greater part of the omitted pages are those devoted to Webster's orthography. The war on that topic was waged for five and twenty years; and as it was won by the opposing critics, there is no need of prolonging it." "The largest publishing house in America, and one of the best class of New York newspapers—which were respectively the first to adopt Webster's orthography—have quietly abandoned it."

"Irving, Cooper, Bancroft, Hawthorne, Bryant, and many others, have wholly and from the beginning, rejected Webster's attempt to reform our orthography." In speaking of the changes Webster's dictionary has undergone, Mr. Gould says: "The present title of the dictionary is a matter of courtesy rather than a matter of fact." Mr. Holmes speaks of the "Websterian peculiarities."

Prof. Marsh has very severely criticised the dictionary in the "Nation." My last authority is Richard Grant White. Every reader of the leading American Magazines is acquainted with Mr. White. I quote from his "Words and Their Uses." "As it laid aside the peculiar traits it ceased to have peculiar faults; its offensiveness passed away with its individuality. When it was Webster's, and was American, it was a book to be laughed at and to be ashamed of; but now, having by the protracted labors of eminent scholars in both hemispheres, been purged of its singularities in etymology and orthography, and partly in definition, and having ceased to be Webster's (except in regard to definitions), and American (except as to the place of publication), it has become as convenient and trustworthy a compilation of its kind as any other now before the public."

Now, since I have made Guyot acquainted with some facts which he never heard of till now, and would never have been likely to know by reading books, I hope he will not be too severe with me when he criticises this article. I hope he will not discharge the whole of his sarcasm at me, but will reserve small share for the eminent author from whom I have quoted. If he wants to read any of their books and inform himself about the English language, I shall be happy to lend them to him.
 BON AMI.

Truth is Mighty.

When Dr. Pierce, of Buffalo, N. Y., announced that his "Favorite Prescription" would positively cure the many diseases and weaknesses peculiar to women, some doubted, and continued to employ the harsh and caustic local treatment. But the mighty truth gradually became acknowledged. Thousands of ladies employed the "Favorite Prescription" and were speedily cured. By drugs.

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The Dairy.

Butter, Eggs and Cheese.

The ninth annual convention and fair of the National Butter, Egg and Cheese Association was held last week at Cedar Rapids, Iowa. There were about 450 delegates present, from New York, Boston, Philadelphia, Baltimore and other eastern cities. There were large delegations from the several produce exchanges, while the smaller cities and dairy districts of the east and west sent accredited delegates. On Tuesday the representative dealers of the country were welcomed by Gov. John A. Gear on behalf of the State, also by Mayor Smith of Cedar Rapids, on behalf of the hospitable citizens of that thriving and enterprising city, while the Hon. F. J. Upton, president of the Cedar Rapids Board of Trade, extended the hand of friendship on behalf of the business men of the city. The annual address of President Belknap, of Boston, was remarkable for its succinct and complete review of the growing dairy interests of the country. President Belknap did not neglect to pay his respects to what he termed the manufacturers of counterfeit butter. The makers of these compounds, which have been palmed off on the public as good creamery or dairy butter, were handled without gloves, and Mr. Belknap's remarks in regard to this unfair and iniquitous trade were received with the greatest satisfaction by a large audience, of the men who make pure butter and cheese, and the gentlemen who supply two-thirds of the country with these commodities. In the audience there were twenty-two States represented, and it was universally conceded that prompt measures should be taken to suppress the traffic in bogus butter, lard and cheese, or at least to compel the manufacturers to sell the stuff for what it is.

Mr. G. P. Englehart of Chicago, addressed the delegates upon the subject of "A Great Industry in Peril." He claimed that oleomargarine was being manufactured in great quantities, particularly in the east, where it had become the favorite imitation of honest butter, and that its sale was seriously affecting the dairy interests of the west. Its makers took the questionable ground that they were public benefactors, in that they supplied a certain class of trade to whom the high prices of genuine butter were a barrier to its use. The speaker advocated stringent legislation to prevent the manufacture of all imitations. The whole subject of oleomargarine, butterine, etc., was ably and fully discussed by representative delegates from several cities, and Mr. George E. Gooch, of Chicago, presented the following:

Resolved, That it is the sense of this convention that a prohibitory law should be passed by the several State legislatures prohibiting the manufacture of butterine and all other adulterations of butter.

The resolution was unanimously approved. There was but one opinion among the delegates in relation to these fraudulent imitations of pure butter, and how to suppress its manufacture and sale was, as it has always been, a matter for which the National Convention has as yet failed to suggest or enforce a remedy.

The exhibition of butter and cheese, in the several classes for which premiums were offered, was the best ever seen in this country. Every package was entered direct from the creameries of the makers, and the display sustained the enviable position which Iowa has reached within a few years, as the leading dairy State of America. In this connection, however, the people of Illinois have just reason to be proud of the fact that the grand prize for the highest grade of butter was awarded to J. S. Dean of Gibson, Ills., from which, at least, it will appear that Iowa is, after all, not very far ahead of one of her nearest neighbors.

Many points of interest were brought out in the discussions. The proper manner of handling eggs received considerable attention. Mr. Willett said western eggs were kept too long before shipment east. At times in New York, five or ten dozen eggs in each case spoil by standing one day. Mr. Smith of New York, said eggs should be put in sweet packing in cold weather. Western eggs are often stale and musty, and are more detrimental to the trade than rotten eggs. He thinks there is nothing better for packing than clear, bright oats, and in holding in cold storage, the temperature should be held at 38 to 40 degrees. The oats can be sold after unpacking. Mr. Willett said that to get at the loss on eggs, an inspector should be sent to the farm to see the eggs when they are packed. He has kept eggs in cold storage three months. A delegate said eggs would keep a month longer if, when packed, they were stood up on the little end.

In the practical working of creameries, the committee on that subject recommended as follows: Inasmuch as the system of gathering cream has been inaugurated in the northwest, and has already attained a magnitude of the most importance to the dairyman; and whereas, the system is yet in its infancy, and as a necessity, contains many imperfections, this convention, therefore, recommends the following regulations: 1st. That the cream gatherers should do the skimming. There can be no dissatisfaction between patron and manufacturer. 2d. That frozen cream, or cream that is very sour or from lobbared milk, should not be used in the manufacture of butter. 3d. That too great haste should not be made in skimming, ordinarily allowing it to stand twenty-four hours in winter, and in some cases longer, and that the temperature for setting be not lower than 55 degs. Fahrenheit in winter. 4th. That, after setting, the milk should remain undisturbed until skimmed, and that any tampering with the same should be condemned by every manufacturer and patron.

There was considerable discussion as to bitter butter. Mr. Tivy of St. Louis, stated the bitterness he experienced was from some cause other than that which followed the use of certain well-

known kinds of food. He found it in winter, but not in summer, and in dairy butter, but seldom in creamery butter. Dr. Betman of Illinois, said there may be two causes—one the feed and the other possibly a minute fungus, resulting from infected stables or unclean setting rooms. Several delegates spoke on the subject, but could give no satisfactory reason for the difficulty. A committee of five was appointed to investigate the cause of bitterness, and if the report is received before the next annual meeting, the members will be informed by circular.—National Dairy Fair.

A Hint to Butter Makers.

Do you like to churn two, three, four hours, or a day even, on your butter? Do you like to take it to the grocery and have him taste it, and, after scowling a few times, offer you about ten cents less than the market price for a good article. If you do, go on in the old way and churn the sour cream with the sweet, regardless of what the consequences may be. If you want a better plan, however, try the following: Get a thermometer—it won't cost you over fifty cents. Then set your jar of cream on the stove in a vessel of water and heat it until the thermometer marks ninety degrees, stirring occasionally to see that it is all thoroughly mixed. Then set away in a warm place until the next day to ripen. Heat the cream to about fifty-eight or sixty degrees when you get ready to churn, and all the difficulties in the way of its coming will vanish, and the butter will appear before you expect it. Of course there are exceptions to all rules, and there may be reasons which will prevent butter coming only after a long stage with the cream. The cream from farrow cows is always longer in coming than that from fresh milch cows. If cream stands too long before skimming it is longer in coming. Cows need salting regularly. Poor keeping affects the size of the butter globules, and consequently they are slower in breaking up into butter. If all these and other causes combined have to be met, of course one need not expect to bring the butter after a few minutes' trial; but ordinarily, if the first suggestions are carried out, a half hour's churning will be sufficient.

Oil Meal for Cows and Calves.

When cows are in profit a little extra feed in the shape of oil meal will be repaid in the yield of milk and butter. It must not be supposed that because a cow is on pasture there is no longer any need for stimulating food. The fact is that with an ample supply of grass, the appetite of the cow for the meal is quite as vigorous as during the winter, when fed on hay. Cows may be very profitable fed with oil meal morning and evening. They lick it up from a trough, if it is made sufficiently large, without any waste. When cows are not tied up at night a good plan for feeding them is to have a square box for each cow, large enough for her to put her nose in easily, and six inches deep. Put the allowance of meal in these boxes. They may be scattered about the yard, at such a distance as will give each an opportunity to eat without being driven away by others. Calves will soon show in their greatly improved appearance and hastened growth that oil meal is good for them also. A small handful given them in their pasture daily will push them forward rapidly. It is well to use a small tin pan to feed them with, and a few minutes spent with the young stock daily is not only an agreeable occupation, but highly profitable, for the more regularly the owner's attention is given to his cattle the sooner he will see any thing wrong, and be able at once to remedy it, and a daily visit is seldom made unless there is some express purpose in it. Let the purpose then be to give them extra feed and a double benefit will result.

Winter Dairying.

Shall we state again, in as few words as possible, what seems to us to be the advantage of winter dairying over our common way of summer dairy work? In the first place more butter can be made in the year. Why? The cows will be in better condition as to flesh at the time they drop their calf. Dropping her calf in November or the first of December, the calf can be fed better as well as the cow, because the person has more time to attend them. The cow, if fed grain—no man can afford to milk a good cow without feeding her—will give richer milk than on grass, and if not quite as much it will make as much more butter through the winter months than in the summer when she drops her calf in April. Being fed grain the cow comes out grass strong, and through the grass season she will give nearly as much milk as when she comes in the spring. When dried off in September or October she will get fat by the time she comes in again, and so the year round she is in much better condition than when she comes in in the spring. We all know how sickly and poor our cows are in this country in the spring, and it takes nearly all summer to get them up in condition to give much milk. The point we make, that the farmers have the time in the winter to attend to the care and feeding of cows and calves, is a good one. In the past the problem, how shall the farmer on a prairie farm, where he raises grain mostly, put in his time in the winter, was to us a serious one.

Stock raising and dairying especially winter dairying, solves that problem. Then, again, as to calves. There is no question that calves raised by hand, if dropped in the late fall, will make at one year old, or can be made to make a better yearling, than one dropped in April or May. The reason is this: By spring the young thing will be able to run out with the herd and have the new and tender grass, whereas, in the old way as most of farmers practice, they are weaned from milk feed just about the time the flies are the worst and grass the toughest and poorest. We all have had our eyes pained at the sight of the poor, half starved and fly eaten things in August and September. If we adopt winter dairying we shall get into the habit of feeding more grain to both cow and calf, and that would be a

great gain. One very important point more and we leave the subject for this time. By this method of winter dairying we have our calves weaned and off on grass by the time our pigs want the skimmed milk. All farmers can see at once that this is not a mean advantage. These are some of the advantages of winter work in the dairy.—L. S. Coffin.

Lydia E. Pinkham's Vegetable Compound revives the drooping spirits; invigorates and harmonizes the organic functions; gives elasticity and firmness to the step, restores the natural lustre to the eye, and plants on the pale cheek of beauty the fresh roses of life's spring and early summer time.

The production of cotton in the south is practically without limit. It was 1830 before the American crop reached 1,000,000 bales, and the highest point ever reached in the days of slavery was a trifle over 4,800,000 bales. The crop of 1880-81 is about 2,500,000 in excess of this, and there are those who believe that a crop of 8,000,000 is among the certainties of the next few years.

The Dr. Harter Medicine Company of St. Louis, Mo., is one of the most honorable and substantial establishments in the country. Dr. Harter's Iron Tonic is one of the standard and most highly esteemed preparations of the day, and justly enjoys a wide and increasing sale. This is brought about by the high merit of the goods, and the judicious and extensive manner in which they are advertised throughout the country. Laudatory columns might be easily written in their praise, but with goods so able to speak for themselves, simple facts serve a better purpose.—Des Moines (Iowa) Western Farm Journal.

Piles, Piles.

Dr. Worman & Co., 906 Pine street, St. Louis, Mo., positively cure piles without knife or pain. Not a dollar unless cured. Send for circular.

A NATIONAL REPUTATION is enjoyed by PRATT DAVIS' PAIN-KILLER, which, for nearly a half century, has been the favorite household remedy for bruises, burns, sprains and all kinds of aches and pains. Look to your supply, and never be without it. 45-51.

Howe Scales are guaranteed in every particular, to be the best made. Borden & Co., General Agents, St. Louis, Mo.

For all open sores on animals from any cause use Stewart's Healing Powder. 50 cents a box. 45-53.

Carbolie Sheep Dip is the best. Address G. Millinekrodt & Co., St. Louis, send for circular.

A CARD.

To all who are suffering from the errors and indiscretions of youth, nervous weakness, early decay, loss of manhood, etc., I will send a recipe that will cure you, FREE OF CHARGE. This great remedy was discovered by a missionary in South America. Send a self-addressed envelope to the Rev. Joseph T. Inman, Station D, New York City. 44-26.

W. H. Mann & Co., Gilmore, Ill., breeders of Dutch, Friesian (Holstein) cattle. Price herd wherever shown, and list and 24 prices young herds at St. Louis Fair. Imported Norman stallions for sale. 45-53.

Agents can now grasp a fortune. Outfit worth \$10 sent free. For particulars address E. G. Rideout & Co., 10 Barclay St., N. Y. 42-52.

Are you aware that a simple cough often terminates in Consumption? Why not be wise in time, and use Allen's Lung Balsam, which will stop the disease and prevent the fatal consequences. For sale by all Medicine Dealers.

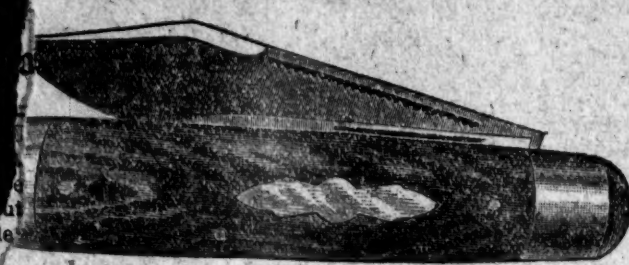
Conveyances make from \$25 to \$50 per week sell goods for E. E. Rideout & Co., 10 Barclay St., New York. Send for catalogue and terms. 44-52.

PARKER'S GINGER TONIC

Ginger, Buchu, Mandarins, Scillings, and many of the best medicines known are combined in this Tonic. It is a medicine of such varied powers, as to make it the greatest Blood Purifier and the Best Health-Strength Restorer Ever Used. It cures Rheumatism, Sleeplessness, & diseases of the Stomach, Bowels, Lungs, Liver & Kidneys, & is especially different from all other Tonic, as it never intoxicates, and it never induces a habit. It is the best Tonic for the young, and for the aged, and for the weak and the nervous. It is the best Tonic for the sick, and for the convalescent, and for the invalid. It is the best Tonic for the laborer, and for the soldier, and for the sailor. It is the best Tonic for the farmer, and for the merchant, and for the statesman. It is the best Tonic for the man, and for the woman, and for the child. It is the best Tonic for the rich, and for the poor, and for the lowly. It is the best Tonic for the healthy, and for the diseased, and for the dying. It is the best Tonic for the living, and for the dead, and for the unborn. It is the best Tonic for the world, and for the universe, and for the God. It is the best Tonic for the soul, and for the body, and for the spirit. It is the best Tonic for the mind, and for the heart, and for the will. It is the best Tonic for the intellect, and for the emotions, and for the passions. It is the best Tonic for the reason, and for the imagination, and for the fancy. It is the best Tonic for the science, and for the art, and for the craft. It is the best Tonic for the knowledge, and for the wisdom, and for the power. It is the best Tonic for the glory, and for the honor, and for the fame. It is the best Tonic for the life, and for the death, and for the resurrection. It is the best Tonic for the heaven, and for the earth, and for the hell. It is the best Tonic for the angels, and for the devils, and for the demons. It is the best Tonic for the saints, and for the sinners, and for the lost. It is the best Tonic for the saved, and for the damned, and for the damned. It is the best Tonic for the blessed, and for the cursed, and for the cursed. It is the best Tonic for the happy, and for the unhappy, and for the unhappy. It is the best Tonic for the good, and for the bad, and for the bad. It is the best Tonic for the virtuous, and for the vicious, and for the vicious. It is the best Tonic for the noble, and for the ignoble, and for the ignoble. It is the best Tonic for the brave, and for the coward, and for the coward. It is the best Tonic for the strong, and for the weak, and for the weak. It is the best Tonic for the rich, and for the poor, and for the poor. It is the best Tonic for the high, and for the low, and for the low. It is the best Tonic for the great, and for the small, and for the small. It is the best Tonic for the big, and for the little, and for the little. It is the best Tonic for the long, and for the short, and for the short. 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A STRONG TWO-BLADE KNIFE.

BOWIE POINT BLADE.



Other knives for farmers and mechanics. A knife for rough work, yet easy in the hand; every blade hand-forged and of the best steel, and will be sent to you for \$2.00, and eight subscribers for the Rural World—one-half of them now and the other half later. The Rural World and knife sent to one address, postage paid, for \$2.00.

"And the Leaves were for the healing of the Nations."

Dr. Pierce's Extract of Smart-wood breaks up colds, fevers, and inflammatory attacks, and is specific for colic, cramps, diarrhoea, and dysentery. By druggists.

The Markets.

St. Louis, December 21, 1881.

[Prices hereafter are for round lots in first hands. Small order lots charged at higher prices. Buyers pay first ten days' storage, except in special bins.]

Flour—Sales: 70 bbls at \$4 60, 105 at \$5 32 at \$5 20 del, 55 at \$5 25, 78 at \$5 40, 125 at \$5 65, 100 at \$5 75, 200 at \$6 15, 135 at \$6 40, 110 at \$6 55, 200 at \$6 65, 75 at \$6 95, 175 at \$7, 300 on p. t.

COOK MEAT—Active and firm. Sales of city on orders at \$3 35@3 40 del. Grocers, hominy and pearl meal at \$6.

BUCKWHEAT FLOUR—Demand light. Choice New York at \$3 50.

RYE FLOUR—Firm at \$6 00@6 25, as in kind.

WHEAT—No. 2 red at \$1 33, No. 3 red at \$1 27, No. 4 at \$1 17, Mediterranean—No. 2 at \$1 37, No. 3 at \$1 35.

CORN—No. 2 mixed at 62½¢, No. 2 white-mixed at 60¢, rejected white-mixed at 67¢, rejected 60¢.

OATS—No. 2 at 46½¢, mixed at 50¢, prime at 53¢.

RYE—Grade No. 2 at 98½¢. Samples at 90¢.

BARLEY—At 85¢@91 06.

HAY—Prime prairie at \$14 25, choice at \$21, prime timothy at \$19 50, choice timothy at \$22.

HEMP—Common and undressed \$95@100; good to choice \$105@120; dressed \$160 to \$190; shorts \$130@150; hickled tow \$65@75.

BUTTER—No material change in the market for the past few days. Receipts fair, and demand steady for all the better grades. We quote: fancy creamery 37¢@40¢; fair to choice 30¢@32¢; fancy dairy 24¢@28¢; good to choice 15¢@20¢; fair to good 25¢@27¢; common to fair and store packed, etc., 20¢@24¢.

CHEESE—Good to choice full stock 11¢@14¢; good to choice part skim, 8¢@9½¢; old and poor 2¢@3¢.

EGGS—Scarce and higher at 26¢ for fresh.

Poultry—Turkeys 8¢@11¢; Chickens—small to fair 1 75¢, good to choice 2 25¢, fancy 2 25¢; ducks—medium to good 2 00¢@2 50¢, choice and fancy 2 75¢@3 00¢; geese \$3 00¢@5 in size. Live—chickens \$1 50¢@2 25¢; turkeys \$5¢@7¢; ducks \$2¢@2 50¢; geese \$3¢@4 50¢.

GAME—We quote: Grouse at \$5, quail \$1 85¢@2 00¢; ducks—mallard \$1 50¢, teal \$1 25¢, snipe \$1, plover \$60¢, rabbits \$1 25¢, squirrel 60¢; deer 4¢@6¢; wild geese; wild turkeys; possum 5¢@25¢.

POTATOES—In steady demand and firm. We quote: New York Peerless \$1 20¢; rose at \$1 23¢; burbank \$1 25¢; Northern \$1 05¢@1 15¢.

SWEET POTATOES—Home-grown red Nansmond at 40¢@45¢ per bbl; yellow do 45¢@47¢ in shipping order.

ONIONS—Lower and dull. Choice Eastern Yellow at 85¢@95¢ per bu.

CABBAGE—Dull at \$1 50¢@2 per bbl.

SAUER KRAUT—Dull at \$9¢@9 50¢ bbl, and \$4 75¢ half-bbl.

CHELSEA—In fair supply and quiet at 25¢ 50¢ per bunch as in kind.

TURKISH—Sell in shipping order at 75¢@81¢ per bu.

WHITE BEANS—Prime at \$3 25.

APPLES—We quote: Geniting at \$3 50, Winesap and Willow Twig at \$3 50, Ben Davis at \$5 00¢@5 50¢.

DRYED FRUIT—In demand and firm. Apples at 6¢ for fair to 6½¢ for prime and 7¢ for bright new. Peaches at 5½¢@6½¢.

FRUIT—Demand only for choice. Red 5½¢@4½¢, white 4½¢@5½¢.

PEACHES—Firmly held. Western 8¢@8½¢, Texas 8¢@10½¢.

GRASS SEED—Timothy at 24¢@25¢; German millet \$1 40¢; Hungarian 60¢@75¢.

FLAXSEED—Better and more doing; firm at \$1 30 pure test.

HEMP SEED—Nominal at \$1 25¢ bid for round lot choice.

CANTON BEANS—Not wanted above \$1 75 for prime.

SAKE—Lakes sold at 1 35¢@1 40¢ per bbl; G. A. at \$1 10¢@1 20¢ per sack.

HOPS—New crop sold at \$1 30¢.

BONDS—Sell at from \$16¢@19¢—latter for dry buffalo.

RAGS—Country mixed at \$2 00¢@2 25¢ per 100 lbs; old rope 2½¢ per lb.

EMPTY BARRELS—Coal and other light oil barrels at \$1 20¢; whiskey do \$1.

SCOTCH IRON, ETC.—Burnt 35¢, stove-plate 60¢, plow 30¢, heavy cast 80¢, wrought \$1 15¢, brass 7¢@13¢, copper 13¢, zinc 3¢, lead 4¢.

Wool—Dub-washed choice at 38¢, fair at 34¢@37¢, dingy and low at 30¢@33¢. Unwashed medium 24¢, choice 25¢, low and coarse 18¢@20¢, light fine 22¢@23¢, heavy do 15¢@18¢.

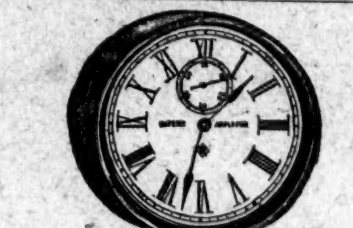
SHEEP SKINS—Green 50¢@55¢, dry salt 40¢@70¢.

DEER SKINS—Bug-eaten, salted and damaged at 30¢ to 35¢; No. 1 at 45¢.

CATTLE—Export steers \$6 25¢@6 60¢, good to heavy steers \$5 75¢@6 10¢, medium to fair steers \$5 00¢@5 65¢, fair to good Colorado steers \$4 75¢@5 00¢, fair to good stockers \$2 00¢@2 30¢, fair to good feeders, 1,000 to 1,100 lbs. \$3 40¢@4 05¢, native cows, common to choice \$2 25¢@4 15¢, native heifers, fair to choice \$3 25¢@4 20¢, common to choice native oxen \$3 00¢@4 20¢, good to choice corn-fed Texas steers \$4 00¢@5 25¢, medium to fair corn-fed Texas steers \$3 25¢@3 70¢, inferior to common mixed \$3 00¢@3 25¢, common to good grass Texas \$2 50¢@3 45¢, milch cows with calves 20¢@40¢, veal calves \$5 00¢@10 00¢, scalawags of any kind 150¢@2 00¢.

Hogs—Yorkers \$5 50¢@6 65¢, fair to good packing \$5 50¢@6 05¢, good to choice packing \$6 10¢@6 40¢, single \$5 50¢@6 00¢, good to choice \$6 00¢@6 30¢.

SHRIMP—Common to medium mudlions \$2 50¢@3 25¢; fair to good mudlions \$3 00¢@3 50¢; good to choice mudlions \$3 50¢@4 20¢; stock sheep \$2 00¢@3 00¢; lamb per head \$1 50¢@3 00¢.



This beautiful clock, an ornament to any room in cottage or mansion, is given as a premium to any one who sends us twelve subscribers (one half new) for one year. We have sent out hundreds of them for premiums, some of which have been running for several years, and all keep accurate time, and give unbounded satisfaction. Every one who reads this can get up the club and get this excellent clock free.

\$10 SCALE FREE!



WEIGHS FROM 1/4 OZ. TO 25 LBS.

This little scale is made with steel bearings and brass beam, and will weigh accurately any package a quarter of an ounce to twenty-five pounds. It is intended to supply the great demand for a housekeeper's scale, nothing of the kind ever having been sold before for less than from \$8 to \$12. Every scale is perfect and will last a person's lifetime. We can furnish any of our subscribers with one of these perfect superior scales—boxed and shipped by express and warranted to give entire satisfaction—FREE, if he will send twelve subscribers at \$1.00 each (one-half new).

THE "WATERBURY."



This watch has been much improved, and the satisfaction expressed by the purchasers is most gratifying.

IT IS NOT A TOY.

Winds at the stem, and keeps time with the best. It has an open dial plate, giving easy access to the regulator. It is strong and durable in all its parts, and will do good service for years.

To any one sending us fifteen subscribers to the Rural World—one half new—and \$15, we will send this watch as a premium.

To any one sending us ten subscribers—one half new—and \$12, we will send the watch as a premium.

To any one sending us five subscribers—three new—and \$8, we will send the watch as a premium.

TESTIMONIALS.

Many think that a watch sent as a premium—free for a club of 5 (half new) at only \$1.00, a few testimonials from the Home and Farm, from those who have carried the same watch, as to its value.

S. H. Dameron, Moss, Ala.: "I received in good order the watch sent; am much pleased with it."

W. C. Syrett, Hurricane Hill, Ark.: "Your two watches came to hand, and J. W. Pipkins and I are very pleased. I have carried fine gold watches worth \$200, but never did I carry one that keeps better time than these two."

Ferry E. Twining, Kiffin, O.: "I received my watch all right. Wound it up and set it a-going, and it has kept good time ever since. I can recommend it to any one who wishes a good cheap watch. I am well pleased."

William Watson, Rochdale, Milan county, Texas, sends for a watch, and writes: "This is the second watch I have sent for, and I will send for four more soon. The first watch pleased every one."

A. W. Stewart, Pineville, La., writes: "The watch I got was all I desired."

S. S. Murphy, Center, Shelby county, Texas, sending for another watch writes: "I received and it has kept time with it ever since. I can recommend it to any one who wishes a good cheap watch. I am well pleased."

James F. Granling, Bastrop, La.: "I received the watch two months ago, and am perfectly satisfied. It equals any watch here, and has kept time without stopping. It is admired by all who see it."

Health and strength given to delicate women, nursing mothers and infant children who use Brown's Iron Bitters.

A SPECIAL OFFER!!

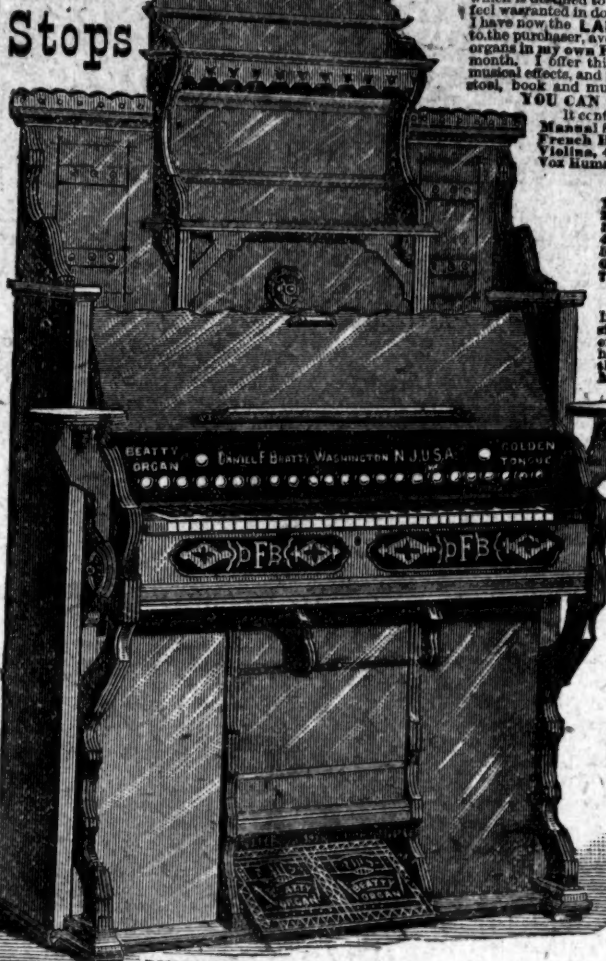
27 Stops

BEATTY'S CABINET ORGANS

It is with pleasure that I offer the most perfect musical combination and wonderful musical instrument ever made.

The "Mozart" New Style No. 12,000

FOR ONLY \$60.00



DIMENSIONS—Height, 75 in.; Length, 46 in.; Depth, 34 in.

The "MOZART," New Style, No. 12,000, Only \$60. Net.

It is designed to be the most popular organ in the world. My success in the past having been so unprecedented, I feel warranted in doing better than ever before for my customers, hence this unparalleled offer. I have now the LARGEST FACTORY IN THE WORLD that ships its products direct to the purchaser, avoiding the cost of middlemen, and thus being able to offer a grander variety of stop work, greater power, more musical effects, and the most elegant exterior, including a thousand of the finest and most beautiful organs, at a price that will astonish you.

YOU CAN TEST IT IN YOUR OWN HOME, free of expense, FOR ONE YEAR.

It contains 27 stops, 10 full sets of Golden Tongue Reeds, as follows:

French Horn, 8 feet tone. Flute, 8 feet tone. Violin, 8 feet tone. Harp, 8 feet tone. Piccolo, 8 feet tone. also Coppel Harmonique, Harp.

BEATTY'S NEW PATENT ADJUSTABLE STOP ACTION.

In this action is reached the highest state of perfection attainable. The case of the "MOZART" Organ is a design of rare beauty and is unrivaled at the price offered. Beautiful Lamp stands. It is of the highest quality of material, and is finished with original designs in free work. Acceptable for music, book rack, music holder of choice design, sliding fall with lock. The beautiful design was never offered before. ORDER DIRECT FROM THIS OFFICE. REFERENCE ON ORDER BOOK.

PLAN OF REHEARSAL.—A caveat for Patent is filed at the Patent Office, to protect this valuable invention. No other manufacturer can build an organ with this Rehearsal at any price.

REMEMBER SATISFACTION GUARANTEED. If you are not satisfied, we will refund your money, or exchange your organ for one of our organs. If you have already ordered, and are not satisfied, we will refund your money, or exchange your organ for one of our organs. If you have already ordered, and are not satisfied, we will refund your money, or exchange your organ for one of our organs.

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